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AMAZING STORIES

FEBRUARY 20c

BATTERING RAMS OF SPACE
by DON WILCOX

CHARLES R. TANNER ★ JOHN YORK CABOT ★ GORDON A. GILES ★ ROBERT MOORE WILLIAMS

AMAZING STORIES

VOLUME 15 NUMBER 2

FEBRUARY 1941

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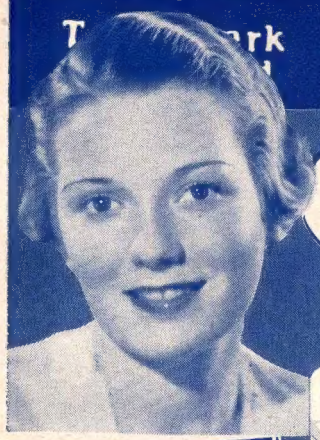

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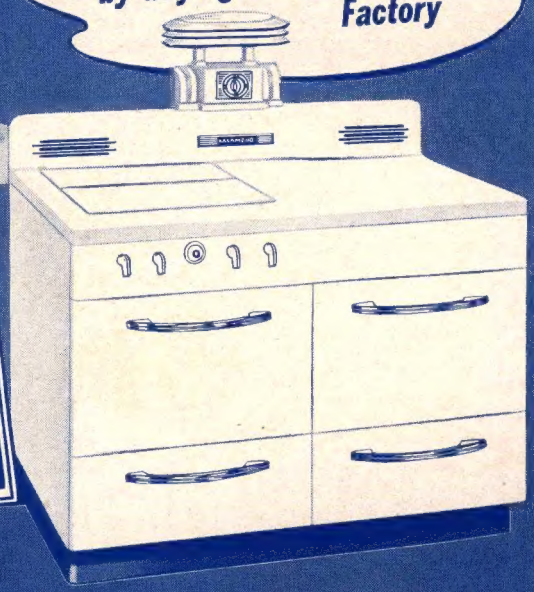

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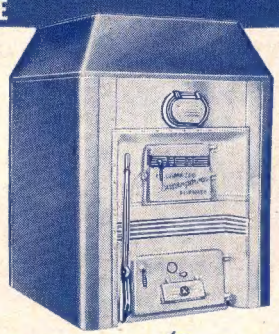

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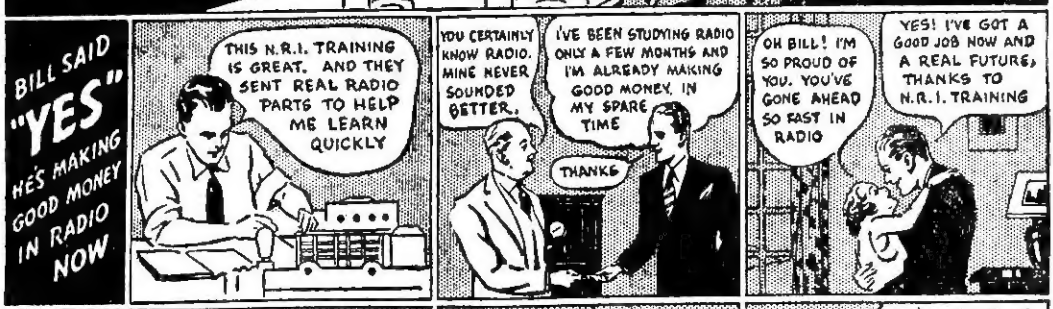
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FEBRUARY
1941

AMAZING STORIES

TRADE MARK REGISTERED

VOLUME 15
NUMBER 2

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Front cover painting by Leo Morey illustrating a scene from "Battering Rams of Space"
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Illustrations by Julian S. Krupa, Robert Fuqua, Jay Jackson, H. W. McCauley, Dick Shaw, Joe Sewell, R. Newman

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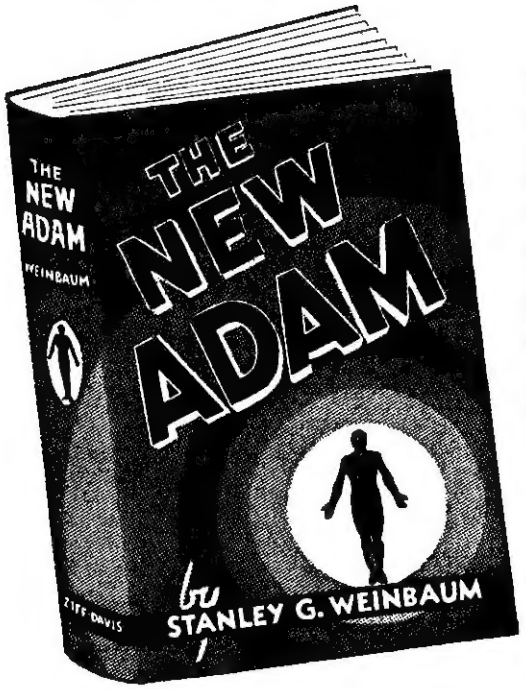

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The OBSERVATORY by THE Editor

AS I write this, the January issue of AMAZING STORIES has been on sale only a few days, but already you have deluged this office with praise for the return of John Carter and Edgar Rice Burroughs.

I'm not going "over the wall" when I say that the John Carter story scheduled for March is even greater than "John Carter and the Giant of Mars." If you thought Burroughs did a good job in reviving the old romance that his first works held, you'll be enthusiastic about his work now that he is getting into stride once more. He's superb!

IN reality, there will be three new John Carter stories, the last to appear in May, so don't say I didn't warn you. If you miss any of them it's your own fault.

JUST to give proof that Burroughs is the most famous name in fiction today, we have been receiving letters from Britain, New Zealand, South Africa, and Australia, asking for dates of scheduled Burroughs stories. To provide an answer, here's the complete schedule:

John Carter in March and May; David Innes, of Pellucidar fame, in July, September, and November.

Our companion magazine, FANTASTIC ADVENTURES, will feature three Burroughs yarns also. Carson of Venus will appear in March, July, and November issues. Don't miss any of them.

AT the science fiction convention, last September, we had the pleasure of meeting Charles R. Tanner, and the result appears in this issue with another of his well-liked Professor Stillwell stories. This time it's a hilarious adventure with an anti-gravity machine. You'll most certainly like it.

ONE day, a few months ago, Robert Moore Williams came into our office, and tripped over his shoelaces. Maybe that gave him an idea. Anyway, he came in a week later with a short story based on that shoelace, and we think he stumbled on a good idea. It's the most amazing murder story we've seen in science fiction, and it's full of some of the finest science Bob has instilled in one of his stories to date. Maybe Bob ought to trip over his shoelaces more often. It seems to do things to his think-tank!

"Don't worry, Lady. My motor runs on alcohol, and these drinks are already included as fuel."

I KNOW you've glanced at our front cover a dozen times already, because I'm doing it myself. It's a grand job, the best space scene we've ever seen, and that's saying a lot, considering Paul didn't paint it. Leo Morey is the man, and he certainly caught the spirit of it this time! And so did Don Wilcox, who is rapidly climbing the heights of your regard for him, with the story "Battering Rams of Space." Next month's cover, by the way, will be by J. Allen St. John, illustrating the second of the John Carter yarns. It's really grand.

OTTO BINDER, the active half of the Eando team, has just been married. It happened on November 2, and Eve Link, the happy bride . . . oops, pardon us . . . Ione Frances Turek, the happy bride, says Adam Link will go on forever. And just to prove it, he's in this issue, with his best adventure of the most popular character of all time, in search of the Norse god, Thor.

(Continued on page 52)

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BATTERING

by DON WILCOX

Like hellish demons these ships roared out of space to blanket Earth with fiery gas; and the lives of millions depended on Lester Allison, June O'Neil, and the battering rams

RAMS of SPACE

"UNTIL these stone walls crumble away," the beautiful girl in Lester Allison's arms breathed.

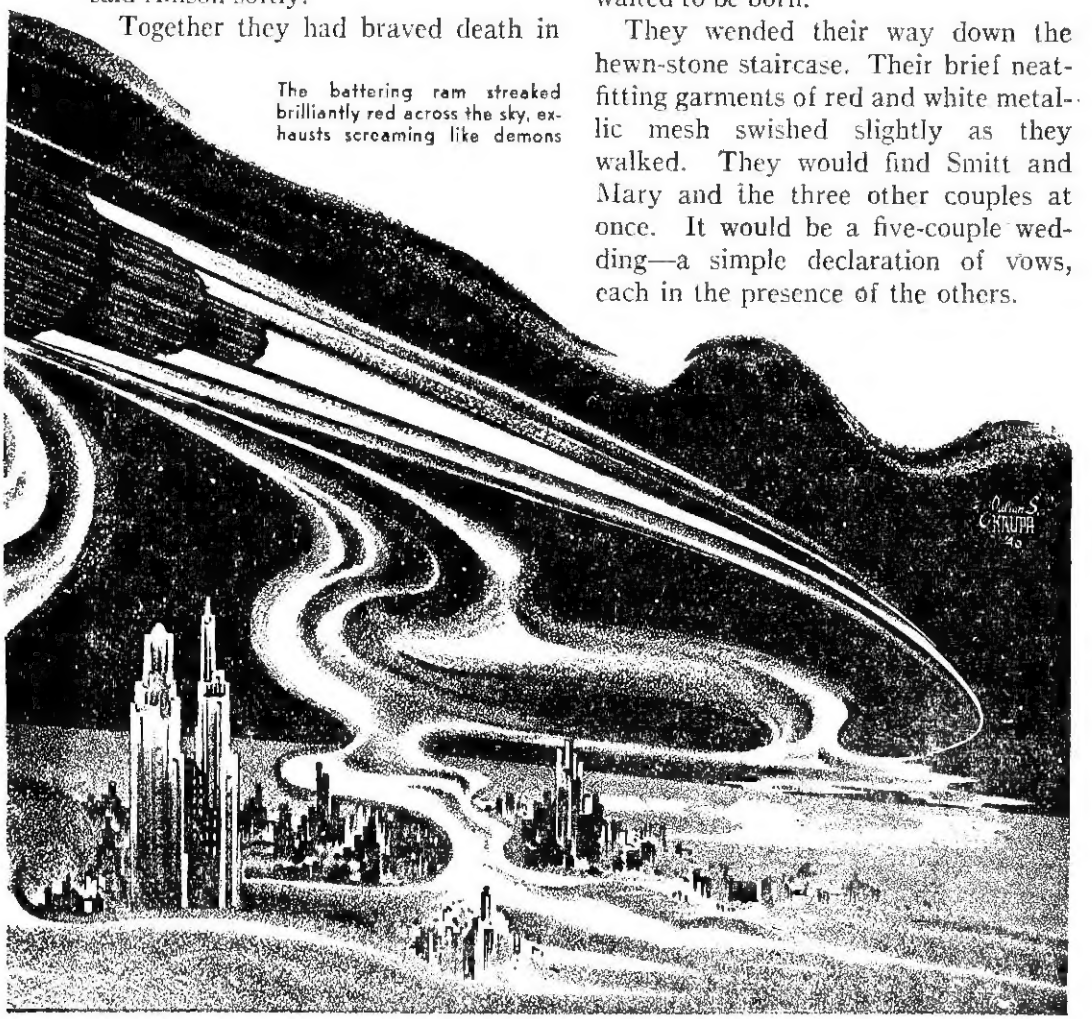
The torchlights glowed upon the red rock walls and shone in June O'Neill's face. The devotion in her dark eyes was the very heart of Lester Allison's new-found world.

"We'll be married this very hour," said Allison softly.

Together they had braved death in these underground chasms of Mercury. Allison had undergone the fatal ritual of the Floating Chop, outwitted his would-be executors and come out alive. Together he and June O'Neill had survived the devastations of Mercury's strange war.

Now the Mercurians were all gone. The slate of the former civilization had been wiped clean. A new civilization waited to be born.

They wended their way down the hewn-stone staircase. Their brief neat-fitting garments of red and white metallic mesh swished slightly as they walked. They would find Smitt and Mary and the three other couples at once. It would be a five-couple wedding—a simple declaration of vows, each in the presence of the others.



The battering ram streaked brilliantly red across the sky, exhausts screaming like demons

A dull roar sounded from far up the space ship runway, and Allison and June looked at each other and smiled. It seemed humorous, somehow, for the empty robot ship which had been transporting the freed Earth slaves back home, to roll back into port for its final load. The final load—the five couples—would never go back. They had decided to remain on Mercury.

"We've found our own little corner of the universe," June mused. "We'll let the rest of the worlds go by."

Allison's smile vanished and his strong face showed a flicker of worry. The roar of the approaching ship had an unfamiliar ring.

Perhaps it needed overhauling. Perhaps—

But in another minute, it would roll into view in the spacious red-walled cavern known as the Red Suburb. Allison and June strolled on.

The robot ship had taken all the other survivors of the Mercury slave raids back to the earth. These five couples had been chosen by Allison for the final load. He had chosen with care. And then, as he had hoped and planned, they had made the momentous decision: they would forsake the earth in favor of these deep rich caverns of Mercury.

Not only had nature favored these caverns. By a curious twist of fortune a genius of science, recently deceased, had established what was perhaps the world's most unique laboratory here. Allison and his little party had inherited it. And the secrets that went with it. And the amazingly facile machines that rolled out and fashioned the marvelous and inexhaustible red and black metals.

Already Allison and the other four men, all of them mechanically minded, had delved into the laboratory mysteries and gone to work on blueprints of their own.

"Listen!" Allison stopped short. "That roar—"

June paled. "That can't be our robot ship!"

The torches along the runway flickered, deep shadows on the high red walls wavered. The low-roaring ship rolled into view.

It was a huge silvery fighting ship with an ominous-looking gun poised over its nose—a *stranger!*

"To the shadows!" Allison gasped, seizing June by the hand.

IN response to a widespread demand from our readers, we asked Dan Wilcox to bring back those two sterling characters of his, Lester Allison and June O'Neill, who first appeared in AMAZING STORIES in the June, 1940 issue.

Pleased with the success of his "Slave Raiders from Mercury," Author Wilcox has written this entertaining sequel. The plot is entirely original, but the two principal characters face peril and heroic sacrifice with the same courage that evoked such an enthusiastic response from AMAZING STORIES fans.

"In "Slave Raiders from Mercury," Lester Allison, taking a day off at the circus, found himself in a sideshow exhibit—a rocket ship, which had somehow come down to Earth. Also in the ship, whither she had fled to escape the unwelcome attentions of an over-zealous suitor, was June O'Neill.

WHAM!—the rocket ship suddenly took off into the void, and our two young people presently found themselves exiled on Mercury. There they became enmeshed in the cunning clutches of Jason Kilhide, a confidence man from Earth who had turned all of Mercury into a profitable racket of which he was the guiding genius.

Kilhide's self-returning space ships were used to kidnap young people from Earth to become slaves of the Dazzalox, the ruling class of Mercury.

Lester Allison nearly gave up his life in combatting this evil system, but finally succeeded in destroying the last vestiges of this corrupt regime, Kilhide included. Thereupon he and June O'Neill and four other young Earth couples—the rest had been sent back home—decided to spend their lives on Mercury, a haven now where they would never be molested, and in addition would be able to make use of the marvelous scientific achievements which Kilhide had unwillingly left behind.

Now, in this sequel, we have Lester Allison and June O'Neill confronted with another great crisis, on which solution depends their very lives.—Ed.

THROUGH the shadows they ran. They fled over the dark upper paths toward the red metal door of the laboratory stronghold. The four other couples raced in and the heavy door closed.

"That's no Earth ship!" someone gasped.

It was well known that the earth hadn't got far in its attempts to build space ships. The robot ship, built in this very laboratory, was far superior to any Earth-made product.

But this big silvery newcomer was the grandest thing Allison or any of the others had ever seen. And the most terrible. Its huge spotlight roved over the cavern walls curiously. The ten onlookers shrank back from the laboratory window, even though they were well concealed by a camouflage of filigreed rock and many yards of distance.

"I don't like the look of that gun," said Smitt.

The silvery space ship came to a stop, then began slowly turning around in its tracks.

"Whether it's friend or foe," said Allison, his face tensed for decision, "we're ten against the universe now. These caverns are ours to protect. We've no defenses but our wits and a few guns."

"Four," said Smitt. "Only four guns."

"One apiece for each of you men," Allison directed.

He hastily outlined a plan. The men would take positions along the upper cliff paths near the ceilings and listen closely. If the newcomers were friendly, Allison would give them a cordial welcome. If they were hostile, he would stage a bluff.

"But if worst comes to worst, fire your guns as if there were hundreds of you, not just four."

June and the other girls had already snapped off the lights through the laboratory corridors, for a glimpse of these immense metal works would be certain temptation to any invader.

"And we'll lock all the rooms," June volunteered, "and hide the blueprints—"

"And hide yourselves," Allison commanded. "If they're looking for treasures and get a glimpse of *you*—"

He broke off quickly, kissed June intensely—a kiss that would be long remembered—and with a hastily uttered, "Weddings later!" he went forth.

The ship's airlocks had not yet opened. Oxygen-masked figures looked out curiously from the portholes, doubtlessly wondering whether human life would be found here.

Slipping through the deep shadows, Allison stationed his four men along the cliff paths, then scampered down into a chasm that opened upon the space ship runway. With a purposeful air he walked into view over the red metal footbridge. In his hand he swung a long black metal ax casually.

Halfway across the bridge he stopped.

S-201

Allison's eyes narrowed. The ship's nose was pointed back toward the takeoff channel through which it had descended. This couldn't be an Earth ship. The earth had built nothing but experimental ships which were little better than death traps. And yet the name that adorned that nose was composed of an English letter and an Arabic numeral!

A man emerged from the airlocks, took a few steps toward Allison, stopped abruptly, removed his oxygen helmet, and spoke—*in English!*

"What's going on down here?" the stranger drawled.

"So you're from the earth too," said Allison in a cordial tone.

"Don't insult me," the man answered with a touch of cynicism.

HE opened his oxygen suit down from the throat and fished a cigarette from an inside pocket. The cigarette was slender and orange-colored, and when he tapped it against his hand it lit.

"I assume you've been around some," said Allison, noting the man's easy adjustment to the light gravity of Mercury. "What's your purpose here?"

"You might call it a good-will tour," the stranger answered with a slight twist of his lips.

He didn't offer Allison a cigarette, but brushed past as if to ignore him. He glanced back as if noticing for the first time that the garments Allison wore were of fine metal mesh. Then he strode over toward the red footbridge, eying the rows of torchlights that trailed along the pathways into distant chasms.

He spent several minutes gazing through field glasses. No other people were to be seen. Again he turned his attention to things near at hand. He studied the well-worn paths and scarred walls. He rubbed his stubby hand over the silky red metal of the bridge. He looked at the scraps of metal on the ground, the black ax in Allison's hands, noted Allison's calm patient gaze.

"You must be lost," said the man, planting his stubby greenish hands on his hips. "Any more down here like you?"

"A few million," said Allison, allowing himself a healthy exaggeration as a precautionary measure. The stranger's manner hardly inspired trust.

"What are you? Traffic cop or somethin'?"

"If it's a good-will tour, I'm the reception committee," said Allison. "Ever hear of an old Earth custom of shaking hands?"

"Earth customs is *out*," said the man, walking back toward his ship. His speech was thick, reminding Allison of tough-guy talk. The man glanced back.

"*How* many million did you say?"

"Several."

During the next few minutes seventy or eighty uniformed men emerged from the ship. They milled around, unencumbered by space suits or helmets, breathing and stretching. An officer called them to order, and the scout with whom Allison had exchanged words mumbled something to them.

Then a third of the men got back into the ship, the rest followed close on the heels of the six officers who strode toward the footbridge.

"Stop!" Allison shouted. "You can't pass this bridge without a permit!"

They came on. They fell into military step and their thudding black boots set up a rhythmic echo. Their uniforms, now that their brown space suits had been removed, were a flashy silver with orange sashes and turban-shaped orange headdress. Modern pirates, thought Allison. Sashes, hats and pistol holsters bore the letter "S".

"Stop! I'll brain the first man who crosses this bridge!"

Allison shouted his threat at the top of his voice. He drew back to the farther end of the footbridge, swung his ax up for action and waited. The officers drew pistols and came on.

But the first boot that touched the bridge brought a hailstorm. *Zing-zing-zing!* Bullets clanged across the center of the span. Automatic guns chattered from somewhere in the upper shadows. The officers leaped back in surprise, and Allison silently prayed that Smitt and the other three men could keep up the illusion of a barrage, if necessary.

"Hold it!" the tall leader shouted, his hands jerking upward. "What the hell is this?"

THE fifty orange and silver uniforms shrank back into a disorganized swarm. The low rumble of the defenders' unseen guns echoed away.

The officers went into a huddle with the scout and there was some rapid, quarrelsome talk. What about this self-confident fellow—was he really from Earth? What if he weren't crack-brained? Maybe there *were* a few millions of people down here. And maybe black axes weren't their only weapons. They had guns at least. Maybe they had explosives planted under this space ship landing . . . *S-s-ssh!*

The swarm crowded back toward the ship and the conference went on for several minutes. Allison could hear little of what was said. The name "Sasho" recurred frequently throughout the conversation. Frequently the visitors' eyes roved speculatively toward Allison and toward the endless shadows that might conceal gunmen.

Gradually their attention shifted to some objects the officers had picked up off the ground. They crowded over the objects, pounded them together, scratched them with knives, scorched them with flame pistols. Allison saw that the objects were scraps of metal—specimens of red and black.

The timely gunfire and the fine metals must have made an impression. The leader of the group, a tall, suave-looking fellow, now came toward Allison with a great show of respect.

"We beg your pardon if we seemed —er—hasty." His manner was in extreme contrast to that of the first spokesman. "We're a good-will party from Venus."

Allison responded cautiously. The change of demeanor made him more suspicious than ever. He held fast to his bluff.

"This bridge is heavily guarded," said Allison. "I've had orders from the dictator to let no one through."

"Dictator, eh? What is he? An Earthman or something else?"

"He's like me," Allison answered noncommittally.

"Whatever he is, he's the man I want to see. Where can I find him?"

"You can't. Martial law is on," Allison declared.

"Hell!" The leader's polite manners were already wearing thin. "How can I get a message through to him?" he snapped.

"I'm his official spokesman. I'll handle your business," Allison purred.

"My business is diplomatic—and *secret!*"

"I'm a diplomatic spokesman," Allison lied, "authorized to handle secret business. That's what I'm here for."

"Have you got any documents to prove that?"

In answer Allison jerked his thumb into the air and a volley of bullets clattered against the nearby wall.

The leader shuffled nervously. "See here, I've come to get some promises from your big shot, whoever he is—"

"He makes no promises," Allison interrupted bluntly.

"Suppose the earth was about to be pounced on by some other planet. Which way would your dictator and his millions take a notion to jump? For or against?" the tall leader demanded.

"Neither," said Allison staunchly. "We tend to our own business."

The leader was pleased with the answer. He glanced at his group. Allison had the uncomfortable feeling that those restless uniforms were gradually gathering closer to him.

The leader engaged him with more questions.

"You know all about this place, do you? How many people there are? How many men under arms? What kind of weapons? What the people do for a

living? What the birth rate is? How the government operates?"

ALLISON nodded. Naturally he knew the answers.

The leader held up a scrap of metal.

"You know how this stuff is made?"

"It's rather complicated—"

"But *you know?*"

"What do you think?"

All at once it happened—so swiftly that the guns up in the shadows couldn't prevent it. The uniformed men flooded in on Allison and swept him across to their space ship. They forced him into the airlocks, and a moment later the big silvery invader went into action.

CHAPTER II

Double Trouble

JUNE O'NEIL couldn't believe it. Watching from the laboratory window she saw it begin.

Dread filled her heart. Across the open space toward the runway she ran, crying to Allison. She fell. She lay face down, her head half lifted. The torchlights before her were only dull blurs. The reality of the passing scene burned into her horrified mind as if it were being stamped with hot brands.

They had Lester Allison! The guns from the shadows didn't stop them. They carried him away at all costs. Bullets cut into the edge of the retreating invaders and men fell. But the plan went through. They had him!

Bullets blasted harmlessly against one side of the ship while it maneuvered about to facilitate a safe pick-up of the fallen bodies. The job was done, and slowly the silvery monster crept back toward the runway.

Now a familiar roar sounded. It was the empty robot ship. June came up on her fingers tensely. The robot ship was returning, after having taken the kidnapped slaves back to earth and freedom.

Down the runway it rolled, headed squarely for the big silver-nosed stranger. On it coasted—within thirty yards—

BLAM! Boom-brroommmm!

The big gun on the nose of the fighting ship blazed forth. The shell caught the black robot ship to one side of center. The black hull leaped.

It bounded from its course and rolled like a log into the precipitous ravine beneath the red bridge.

Out of the silvery monster rocket motors flashed fire. The big fighting ship shot up through the runway out of sight. Moments later its roar died away.

Allison's four aids, who had scurried down from the cliff paths, their automatic guns in full action, now trudged back from the mouth of the runway. Futile gesture—to pump bullets at a departing space boat! They were shocked past reason—shocked at their own helplessness. The silvery ship was gone!

They stopped and looked about. Nothing remained of the visit but some bits of bright uniform and a few pools of dark blood. And a few yards beyond —June O'Neil lying face down, her head in her arms. And the other girls back of her, white and trembling.

June hardly knew when the girls picked her up and helped her to a bed. The hours that followed were next to unendurable for everyone.

Nobody spoke of the weddings. There was no talk of the new civilization that had aroused so much enthusiasm a few hours before. Without Lester Allison, the nine of them were spokes of a wheel without a hub—or planets without a sun.

In time the men went to work on the

returned robot ship. The heavy hull was wedged fast in the ravine. It was a small job, however, to turn out a power derrick from the metal works to lift it. A gleam of hope came up with the salvaged space vessel.

"Once we get this thing repaired," said Smitt, "we'll hike out after Allison and bring him back."

"Some capital city on Venus—that's where they took him," said Laughlin, one of the best scrappers in the bunch. His sharp ears had caught everything.

The robot ship groaned and came out of its trap, and the men engineered it into the fine laboratory Jason Killride had unwillingly left them and converted the big shop into a space ship hospital.

"Tell June not to grieve any more," Smitt kept saying to Mary, even managing to grin a little. We'll have him back before many days."

BUT Mary knew that June O'Neil's shock was too deep to be relieved by any spurious hopes.

The robot ship was badly damaged. The hull had suffered little, for Mercury metals were tough. But the instruments had been crippled. Intricate robot controls, governed by keys set in the laboratory, were more than the men could understand. The girls searched through the laboratory files, high and low, for explanatory diagrams, but without success.

The men experimented until they went gray with exhaustion. The sharp-faced, boyish Laughlin penetrated the mysteries farther than anyone. But he saw that it would take months for even him to conquer the problem.

At last they were forced to accept the bitter fact. The robot ship was dead. The four men and five women were here for better or for worse. And their guiding spirit, Lester Allison, was gone—to an unknown destination.

ABOARD THE S-20, Allison shot through the starry blackness toward Venus.

If rocket motors could be stopped by a man's inward rebellion, the S-20 would have gone dead before it budged from the Red Suburb of Mercury. But Allison's anguish was a powerless thing. He was the victim of something hostile and vicious. It was up to him to face reality.

Why had they taken him prisoner? He didn't know.

Not until after the hubbub over the fifteen dead or wounded men had calmed down did the Venusians pay much attention to him. They had him in their toils, and that seemed to be as much as they cared about for the present.

Left to his own devices, Allison made himself comfortable on a bench in the fore end of the ship. He pretended to be absorbed in the heavens. Actually he kept his eyes on the pilots, studied their dials, memorized their manipulations.

A transparent partition separated Allison from the men at the controls, but once the door was left open, and he could hear them discussing whether they should swing around past the earth. The officers pressed the suggestion upon them. They had plenty of time, since their Mercury job had been dispensed with so swiftly.

So the S-20 swung past the earth.

The very sight of Allison's home planet uncorked a great deal of talk that might be called sentimental. The sentiment was—pure hatred. Hatred of the earth seemed to be bred into these men. And yet Allison couldn't get over the notion that they were Earth men.

Their skin, he noticed, carried a grayish pigment—almost green; but this could have been a peculiarity induced by the climatic conditions of Venus, perhaps. Still, there were other phys-

ical oddities: the noses were inclined to be flat, and the hands short and stubby.

But the talk was definitely right out of America—in fact, it might have been borrowed wholesale from a den of American gangsters. To hear them cursing the earth in the most colorful of Earth slang was incongruous enough. But when they began recounting some of their experiences *on Earth*, it was more than Allison could fathom for the moment.

HE gathered that each of these men had made a trip to the earth at some time or other, although, the earth had been innocent of the fact that their ships had landed. Each man had gone there to commit murders or other crimes as a part of their initiation into the service of what they described as the "Sasho Empire." They bragged of their crimes.

Allison wasn't sure what it was all about. His chief business was to observe how the pilot steered the ship.

Presently the big pearly white ball that was the earth inflated before them until it filled a fourth of the sky. The men busied themselves with telescopes trying to discern some sort of fresh scar. Allison gathered that they or their brothers under the Sasho banner had something to do with the formation of the scar they were looking for—a line of black on the North American continent.

There was much talk about Sasho's Empire, Sasho's other ships, Sasho's plan of destruction. But no scar was seen. Thick atmosphere and continents of clouds made it impossible to see anything. So the S-20 pulled away straight for Venus.

Now the officers began to stew about what they would report to Sasho.

They argued over what they had seen on Mercury, and when they boiled it down they hadn't seen anything. They had plenty of "evidence," they said, that a population of "several million Earth people"—American offshoots, apparently—lived there!

They began to make excuses to each other for not actually invading the place.

But the tall flat-nosed leader with the gold "S" medallion on his chest said what the hell, there wouldn't have been any point in sacrificing any more life. They had picked up an official spokesman who was A-1. Did Sasho expect them to capture the confounded dictator of the planet himself? They'd lost enough men as it was.

Allison chuckled to himself at this point. They'd swallowed his "dictator" yarn, hook, line and sinker!

The officers argued some more, and ate, and smoked orange-colored cigarettes—and agreed that they'd better cook up a story that would sound good to Sasho, and do it right now!

Thereupon Yawman, the tall leader, called Lester Allison to the conference table and the other officers gathered around. There were microphones to pick up all the talk, and amplifiers, so that everyone aboard would know what was decided on.

Yawman paced about, slapping his orange sash against his knee, and doped out a story. They had got into the underground world at Mercury, he said, and had had to march two hundred miles hoping to get in touch with the dictator—only to find him away, gone to suppress some "rebellions!" But they *did* communicate with him and he gave them the Honorable Allison as his spokesman!

"That means we're banking on you, Honorable Allie," Yawman said with a slight taunt. "If you like to live, play the game. If you make Sasho any false promises and your dictator don't back

you up, it's your neck, not ours—see?"

"I'll make no promises that my government won't back to the limit," Allison answered.

He wondered how far he would have to go with his fabricated "dictator" and the non-existent "millions of people." Certainly he had no intentions of revealing that there were only nine persons standing guard over the world's finest metal mills!

"Then we're all set," Yawman said.

The tall Venusian went over the high points of the story again, to be sure no one would get crossed up. He added that on the way back on their "two hundred mile march," they had bumped into a "thousand rebels" and fought their way through, and *that* accounted for their dead and wounded!

SOMEONE ventured to doubt that they would have stopped to pick up their dead under such fierce gunfire.

Yawman considered and said, "Right! We wouldn't."

Thereupon the officers threw the dead soldiers overboard by way of the disposal chute—not neglecting first to loot them of everything but their uniforms.

One of the wounded men—and Allison recognized him to be the surly scout who had first approached him at the red bridge—got angry at these proceedings. He threatened to spill the whole truth to Sasho.

His threats were somewhat of a mistake. The officers exchanged glances and dragged the luckless scout to the disposal chute, and his pleadings became an hysterical wail, but down he went to join the other corpses. There were no further "disagreements."

VENUS WELLED up out of the velvet heavens, bluish and bright with fluffy atmospheric storms under the sunlight.

Allison followed the dials as if the landing were his own responsibility. Mentally he was fast becoming a pilot. He anticipated several of the pilot's moves. He watched the colored lines come and go through the transparent chart, clicking off the miles of distance. He felt the cushioning effect of the atmosphere.

The counter-motors gave him a sickening sensation of falling in the opposite direction. Allison wanted to faint but he held fast, snatching at the last detail of that most perilous process—landing.

"On your toes, Honorable Allie!" barked Yawman with a touch of scorn. And then the ship set down on the tarmac.

It came to a rolling stop on the broad landing field. Blue domes of a Venusian capital were on the horizon. Yawman clipped a pair of handcuffs to each of Allison's strong wrists and Allison found himself linked to two husky silver and orange-clad soldiers.

Radio messages had been active during the last few minutes. Now Allison learned what was in the air: an inspection. Sasho had called for a space ship assembly for this very hour. It was already in progress. The crew of the S-20 would just have time to make it.

"He might have given us an hour's notice," one of the officers grumbled, hastily donning a fresh orange sash.

"He's damned full of whims," griped another.

"Probably getting in a sweat to move ahead with his plan of destruction," Yawman commented. "Better go light on the crabbing. There'll be some promotions in the air after we start scorch the earth. Sasho knows what he's about."

Allison marched out with the others

dazedly. It was breath-taking to step on the soil of Venus. Under more favorable conditions, it might have been a glorious thrill. As it was, the very atmosphere seemed charged with ominous electricity.

The vast wide-open space port was studded with big ships—fighting ships, dozens of them. Some were larger than the S-20, with bulky barrel-like hulls that might have been made to carry gigantic oil tanks.

The sky fighters were lined up in a long row, their noses even and their guns aimed in the same directions. Standing in their shadows were the uniformed crews, lined up in hard-boiled ranks that were almost defiant with stiffness.

YAWMAN barked rapid orders to get his men arranged in time. The soldiers on either side of Allison kept their hands back so that the handcuffs were out of sight.

"Silence!" Yawman snapped, and he fell in at the end of the line. The big military men of the Sasho Empire came along at a brisk pace.

Allison knew the Emperor Sasho at first glance. He was half a step ahead of the others—the big man with the hunched-down head and the huge chin, the heavy shoulders that squared out from above his ears. Bedecked in a distinctive uniform with sashes and medals and jewels, he was a blaze of color.

An ancient pharaoh, thought Allison, might have traded his second best crown for that flashy outfit. A pirate would have certainly cut throats for it.

Strange to say, Sasho carried no weapon but a small yellow quirt. This he wielded with such dexterity of his wrist that his shoulders scarcely moved.

Allison observed several samples of this deft whipping skill as the inspection party came down the line. One soldier had too much twist in his sash, and the Emperor lashed him across the fingers with a sharp reminder.

A member of the S-20 crew tried to make a last-minute adjustment of his own sash. A package of candy fell out. Sasho strode up in time to see it. His wrist flicked and the whip caught the luckless soldier lashingly across the face. The mark filled with blood, and Sasho gave a low cruel laugh. His voice was like the grating of rusty chains.

In front of Allison, Sasho paused, glaring at the odd red and white-mesh uniform. The hulking Emperor's chin jutted upward, his black mustache drew down, his eyes gathered into slits.

"What's this?" Sasho growled in his rusty-chain voice.

Allison's heart pounded. Sasho's guttural breathing was hot on his face.

Yawman spoke up. "Your majesty, that's our ambassador from Mercury."

Sasho gave an approving grunt. "Keep him on tap. I'll get around to him later. Maybe tomorrow, maybe in a couple weeks."

The military party passed on. Allison wondered if they had noticed the handcuffs. Perhaps they were used to receiving their ambassadors in handcuffs.

CHAPTER III

The Cruel Napoleon

EMPEROR SASHO took his place upon his throne. It was high noon, as time on Venus went. He had just finished a hearty breakfast. He tapped an orange-colored cigarette, it lit, he placed it between his teeth.

Yellow teeth, they were, with twisting lips that tightened over them. He glanced at his handsome self in the pan-

el mirrors, gave a self-satisfied grunt. That damned little wench with the stubborn chin and the stingy lips! She'd better keep her promise and come in today or he'd knock her ears down.

Involuntarily his hand fell on the long black bull whip and he lashed it out toward a mirror. He blew cigarette smoke out of his mouth, dropped the whip, pressed a button.

At his touch Sasho's business day officially began. The circular walls that formed his small private throne room *lifted*—panel mirrors and all—and folded into the lofty ceiling. This first daily shift of scenes was accompanied by buzzers and bells throughout the capital building. The Emperor Sasho was on his throne!

The throne, a sumptuous composite of steps, rostrum, desk, seat and Emperor, was now in full view before the oval-shaped room. The people came to their feet and stood at attention until Sasho cracked the long black bull whip. They re-seated themselves at the rows of desks, and the oval room resumed the hum of an immense business office.

The attendants and secretaries went on with their routine business. Here and there among them were new faces —persons who had come to the seat of government with their special problems, or who had been brought here because they had *become* problems!

Sasho sat smoking cynically. He liked this time of day. He liked to sit before the hall full of people, ready to whip out a final decision whenever his subordinates got into a deadlock. This was power!

Moreover, it was luxury. Sasho liked this time of day, because the shafts of sunlight shone down on his jewel-studded fingers and sent blades of colored light playing over his black marble table.

His eyes roved over the room. Those five old green-faced buzzards over there were rebels out of the Jagged Mountains, he'd bet. The Cutthroat Congress would make short work of them. And there, in the red and white, was that captive from Mercury.

If *he* was as easy as the three from the nations of Mars, there'd be no trouble on that score. One of the Mars ambassadors had committed suicide on the flame-cloud excursion to the earth. And what a juicy excursion that had been! Sasho smiled reminiscently to himself.

But wait till the real business began! Damned if he wouldn't fry the old earth down to a cinder! And to think —if he hadn't pulled out when he did, he'd have spent these last four decades in a cell! Four decades!

"Your majesty—"

"Well?"

"The young rebel I spoke to you about yesterday—"

"Send him up."

The attendant went back to a desk and directed a well set up boy to the throne. The boy failed to bow when he crossed onto the orange and silver rug. Sasho's black bull whip lashed out. The boy emitted a scream of pain. Attendants throughout the room laughed raucously.

THE attendant and the hurt, frightened boy mounted the steps. Sasho touched a button and the circular wall descended. The three of them were alone in the little throne room.

"So you're a rebel," Sasho growled. "You think because your father was a Venusian—a damned anti-Sasho Venusian!—that you won't have to bend to the Sasho Empire."

The boy was too scared to answer.

"You know what happens to boys that won't bend? We bend them!"

Sasho enjoyed the effect of his own

words.

"If we can't bend their wills, we bend their bones, see? Listen! I'll let you hear how it feels to have your bones bent."

Sasho snapped a switch and an amplifier brought in a pandemonium of such terrible crying and screeching that the boy shrank back, tripped on the steps and lay trembling in a heap.

"Get up!" Sasho roared.

The attendant helped the boy back to the rostrum.

"How old are you?"

"He's ten," said the attendant when it became evident the boy couldn't answer.

"Ten!" Sasho muttered.

A twinge of something caught him. He cracked the bull whip at the attendant.

"Damn you! What do you mean by bringing ten-year-olds in here? Get the hell out!"

The walls shot up and telescoped into the ceiling. The boy and the attendant fled out into the open oval room, but the whip caught the attendant with four deep lashes before he scurried out of range.

A secretary of diplomatic affairs bowed onto the rug and mounted the rostrum.

"Your Majesty, the ambassador from Mercury awaits your pleasure."

"Ten!" Sasho muttered to himself.

He hated to admit it to himself, but kids were the only human beings he had the slightest sympathy for. His eyes pushed into slits. He had been ten when he fought his way out of prison and onto the Death Ship.

Of the seven hundred criminals who had fled the earth, he'd been the youngest—and the toughest! They had told him he was the toughest, and by Jupiter he had made their boast good. And now look where he was!

"Your Majesty, the ambassador from Mercury—"

Sasho didn't hear, for that hard-boiled, beautiful girl with the stubborn chin was coming over.

"The papers you ordered from the treasury office," the girl said, mounting the steps saucily.

"Your Majesty, the ambassador from—"

"Can't you see I'm busy!" Sasho barked, and the secretary of diplomatic affairs took his cue and scurried back.

"One moment on those treasury papers," Sasho growled.

The girl stopped with a faintly mocking smile. Sasho touched a button and the circular wall descended. He and the girl were alone.

"You couldn't be angry again this morning?" the girl said sarcastically, sitting down at the side of the desk.

"Those damned attendants!" Sasho lit a cigarette and tossed the pack across the desk top. "Bothering me with ten-year-old boys!"

"Absurd," said the girl, adding cunningly that the most important man on Venus should be occupied with more important things.

"On *Venus*, did you say?"

Privately Sasho thought of himself as the most important man in the entire solar system. His conquests of the past decades had cut a wide swath in interplanetary history. And this was only the beginning.

"You're the most important, the most powerful, and by far the most picturesque emperor that ever lived."

THE girl blew smoke into Sasho's face. He glanced at himself in a panel mirror, drew his chin up, pulled his mustaches down. He caught the girl by the wrist and forced a kiss upon her. She returned to her cigarette with many a twinge of romantic flutterings.

"Of course, ten-year-olds *can* be important," she said tactfully. "*You* were important at ten, from what I've heard."

Sasho felt a familiar glow in his head and chest.

"I beat the cockeyed earth out of a rap, all right! There was seven hundred of us. We weren't good enough for the earth!"

Sasho's voice grew bitter as he fell into a well-worn train of thought. That dirty low-down Earth! Jails for folks that grew up on the wrong side of the tracks! Laws for the rich folks to hide behind!

"We didn't have any right to live. They didn't want us in the way, so they locked us up. I was the only kid in the bunch, and I was plenty tough.

"And then this crackpot of a scientist finished up his junk-heap that everybody called the Death Ship, and he needed a crew to ride in it and called for volunteers. Hell, what was a Death Ship to us one way or the other, with some of us up for life, and some for death!

"All the bunk they whipped up about sacrificing our lives for science didn't fool us one bit. None of the officials thought that Death Ship would get anywhere. All they wanted was to save feeding us. Save the trouble of strapping us to the hot plate and jamming on the juice.

"So off we went, and what a laugh! What a helluva laugh! We set down on this little planet like we was an egg! An egg!"

The comparison pleased Sasho. He paced around his throne room, rattling with boastful chuckles.

"That Death Ship was an egg, all right. But the damned scientist that laid it never got to cackle. The earth never found out. We've slipped back there enough times—and they *still* don't know. But *we've* done plenty of cackling, by Jupiter!"

Sasho poured himself a drink and grew expansive with the memory of conquests. He'd fought his full share of every battle, even though he was just a kid. And the way they'd slaughtered Venusian men and converted Venusian women was a lesson in history all by itself.

The hard-boiled girl shuffled restlessly. Sasho raved on.

"It's amazing how far a neat bit of slaughtering will go." He laughed coarsely. "A neat bit of well-placed devastation—that's how we did it."

The seven hundred criminal exiles had played in luck. The native Venusians had been softened by civilization, and their best men had become tangled in the pudding of soft politics, and their best women had grown bored with the ease of living.

"They had plenty of science too," Sasho gloated, "but they'd forgot all they ever knew about flame guns and explosives. You can figure for yourself what a darb of a setup that was for us seven hundred professional killers!"

The girl twisted her lips sarcastically.

"Do you always cackle in the same key?"

Sasho shot an angry glance over his thick shoulders.

"Go ahead. Don't mind me," said the girl, reaching for another cigarette.

"So you want me to shut up, do you?" The chains in Sasho's voice clanged harshly.

"I didn't mean anything. Go on and finish—" she protested.

"So you're getting tired of me!" Sasho snarled.

"No. No, I didn't say that!" the girl wailed.

"GET out, you stubborn little devil! I've had enough of you! Get out,

damn you! Tell those space ship rats you're fed up on the Venus luxuries. Tell them you want to go back to Earth —where you can walk the streets and starve!"

"No! No, your Majesty! I didn't mean—"

Sasho caught her at the throat and blasted his words at her face. He'd show her! He'd send her back to the earth and she'd get hers right along with the rest of the Earth scum! He screamed,

"We'll come down in our gas flamers and scorch your insides out and singe your hair off, and you'll die with your tongue hanging out, and you'll be saying to yourself this is fine, this is just dandy! You'll say old Sasho treated you too decent up on Venus and you couldn't take it. So you got sassy and got sent back to the earth with the dregs of the universe, where you belonged!"

"Forgive me, Sasho! Forgive me, honest—" the girl cried in utter panic.

"Shut up and get out!" Sasho roared.

The circular wall flew upward. The amazed throngs in the big oval room saw the girl sprawl down the rostrum steps. The irate Emperor caught up his whip and cut a stripe across her naked back as she fled across the silver and orange carpet.

Needless to say, this action was greeted with sadistic laughter throughout the oval room. The attendants and officials had long since learned that the Emperor's temper tantrums must be interpreted as sportive jokes on whoever happened to be the goat. Laughter proved that they were on the side of the Emperor. And it was the best tonic for his ego.

"Your Majesty, the ambassador from Mercury who arrived yesterday—"

"Give me a rest!" Sasho bawled harshly, still looking after the girl. "What's Mercury to me?"

"But you spoke of making arrangements before launching the big plan—"

"Hell, the plan don't launch till September, Earth time. That's most of four months off. Keep him on tap. I'll get around to him."

CHAPTER IV

"Peace"—Dictator Style

DAY after day Lester Allison was conducted from his lodging place to the capital. Day after day he boiled with inward resentment. He felt like taking a knockout punch at everyone who came near him.

Everyone hated the earth. The hatred was almost a religion with these people. It was the very backbone of the gigantic destructive plan everyone was glowing about.

Lester Allison didn't hate the earth. He began to realize for the first time what it meant to him. He thought constantly of June and the other eight comrades he had left in Mercury. They had thrilled to the thought of starting a fresh new civilization. But what a sick bunch they would be if they knew the awful fate that was being planned for the earth.

"Destruction is the Way to Power." Allison read the words daily on the capital arch. That, indeed, was the core of the Sasho philosophy. Four months of waiting and observing were convincing proof.

Little by little Allison began to grasp what had happened here. From what he had picked up on the S-20, at the lodging house, and from every contact in the capital as he was passed along from one official to another, he began to piece together the story.

It was the story of brutal conquest by a few men—criminals who had ar-

rived here from the earth forty years ago and set about to kill everybody they couldn't convert to their cause. And their cause was the destruction of anything and everyone that stood between them and the wealth and power they coveted. Ultimately they would take their vengeance out on the entire planet.

Forty years of this had transformed the once-peaceful Venusians into a brutalized, degraded people. Originally this nucleus of American criminals had established themselves as the Cutthroat Colony. But their young leader, who grew up from childhood in their ranks to become the personification of their evil doings, changed the name to the Sasho Empire and gave its seven hundred Cutthroats all the class and swagger of a rich pirate crew.

Allison was not long in learning to tell who were the native Venusians. They were the ones with the greenish-gray pigment, the stubbiest hands, the flattest noses. But there were many half-castes. Most of the capital crowd were these, as were the warriors he had seen aboard the S-20.

Allison was not surprised to learn that the seven hundred Cutthroats had had large families from Venusian wives. This had been an important strategy in the expansion of the colony. Now the conquered cities abounded with children and grandchildren traceable to Cutthroat paternity.

"The rebels against the Sasho Empire have been reduced to a negligible quantity," the secretary of the diplomatic service explained to Allison as they waited for the interview with Sasho.

Most of the rebellious Venusians had fled to the Jagged Mountains, and were harmless; but Sasho still enjoyed searching them out and torturing them, which of course was good fun for everybody, the secretary said.

Allison nodded. He was beginning to understand. Cruelty and brutality and killing were things to be enjoyed, according to the Sasho way of thinking.

"But what happened to the seven hundred Cutthroats?" Allison asked.

The secretary explained that many had died in the past forty years, but those who were left were busy enjoying the fruits of their conquests.

"They're all right here in the capital building. Want to see them?"

THE secretary led the way to a large hall in the basement floor. The door was marked:

CUTTHROAT CONGRESS
ALWAYS IN SESSION
ENTER AT YOUR RISK

It was a foul-smelling place and Allison did not stay long. But he caught a glimpse of the dozens of old men, many of them sumptuously dressed, busy at poker games and bars and shooting contests or other less palatable diversions.

"They're not the sure shots they used to be," said the secretary, "but they still have their fun. Sasho sends them all the green-faced rebels that are caught in the Jagged Mountains. They take care of them, gangster-style, and the treasury furnishes them all the ammunition they need."

At that moment the loudspeaker boomed a call for the ambassador from Mercury to report at the throne. The secretary ushered Allison up to the oval room in a hurry.

"Better give the Emperor what he wants," were the secretary's parting words of advice.

Allison marched across the room to the throne. In the excitement of the

moment, he forgot to stop and bow. The whip cracked him on the bare arm and blood gathered on his triceps. The mocking laughter died away and he heard Sasho's grating voice.

"Come up, my friend. Don't mind my little joke. I like to whip first and explain afterwards."

Allison mounted the steps slowly, meeting Sasho's hard narrow eyes. He mounted with fists and teeth clenched. A square slap at that ugly face would be an appropriate little joke of his own.

Allison restrained himself. Those flashes of light from Sasho's jeweled fingers somehow reminded him that here was *power*—power built out of the glory of murder and robbery—power that could reach out to the earth or to Mercury—

"All right, open up!" Sasho growled, and the chains in his voice were tight. "I'm in no mood to ask questions. Sit down there and cut loose. I want to know what you've got down in Mercury. And don't skip nothing!"

"We've got plenty!" Allison retorted.

He took the seat at the side of the black marble desk and began. Disregarding the growing jealousy in Sasho's eyes, he unleashed his imagination. He built up a dictator who was a man of steel. He constructed a kingdom in the bowels of Mercury that would have turned any military power in the universe green with envy.

Sasho's breathing became heavy. He glanced around the oval room to the desks, from which important staff members were watching this conference with keen interest. Sasho touched a button and the circular walls descended. He fingered an orange cigarette, without lighting it, crumpled it in his hand.

"Your dictator will be branching out to other planets," he prodded.

Allison shook his head. "Positively not. He's a radical on that point. No outside aggressions. An unbreakable defense against invaders."

Sasho grew easier. "Him and I should team up."

Allison had no ready reply. His bluff had carried him into deep water and he had a feeling there were shoals ahead.

"Well, what about it?" Sasho snarled. "Are you big enough to fix it?"

"What's the point in teaming up?" said Allison. "The Sasho Empire seems to be doing all right as it is."

SASHO got up and walked twice around his desk, picked up a telephone and barked an order. A moment later an attendant entered the throne room, deposited a tray, and went out. On the tray were scraps of red and black metals that had been brought back from Mercury.

"I hear this stuff is cheap where you come from."

Allison didn't answer.

"We've had our scientists chawing on it since the hour you got here. They say the Sasho Empire ought to have some metal with the stand-up that this has got. We could use it in our business. We could use oodles and gobs and shiploads of it."

Sweat was breaking out on Allison's face. "The raw ore is pretty heavy stuff to cart around in space ships."

"That's what I figured," Sasho agreed. "All right. We could come down to Mercury and set up a little ore mill or two. Just give us an out-of-the-way corner. Your dictator couldn't kick on that. Him and I would be pals."

Allison was on thin ice. "What does Mercury get out of it?"

"Protection."

"We don't need it. As I explained, we're well fixed to take care of ourselves," Allison bluffed.

"Maybe." Sasho's eyes took on a happy murderous gleam. He lit a cigarette. "Did you ever stop to figure out this solar system is getting closer together, with space ships improving right along? The universe is getting closer together, and it's getting more dangerous. *Ain't it?"*

"Perhaps," Allison admitted.

"And it's gonna get a helluva lot more dangerous." Sasho sat down to look at Allison squarely. "See here, I want to know something about you and I want it straight. Are you in a position to bind your dictator to an agreement?"

Allison pressed at the back of his chair to keep from squirming. "As I told you," he said coolly, "my dictator doesn't like making outside agreements."

"What he likes ain't the point!" Sasho growled. "You're his ambassador. What I want to know is whether you've got the power to bind him to an alliance. Have you or ain't you?"

Allison saw that he was between the devil and the deep sea, with the devil crowding him dangerously. If he should say that he had the authority to make alliances, Sasho would hound him —perhaps torture him—into making one.

But if Allison should say that he didn't have the authority, Sasho would send another expedition straight back to Mercury to get someone who could make commitments. And then the whole bluff would burst and Mercury would be lost. And Allison's comrades and his dream of life and June—

"I have the authority," said Allison in measured words, "to make—*or refuse to make*—alliances."

"All right. We'll draw up an alliance," Sash snapped.

"The hell we will!" Allison exploded, coming to his feet.

Impulsively he seized a chunk of red metal off the tray, swung it in his fist defiantly.

"I was kidnaped and thrown aboard your space ship, I was brought to Venus in handcuffs, I was whipped as I came up to this throne. Do you think I'm in any mood to grant favors?"

ALLISON slammed the metal down on the black marble table savagely and the chips of marble flew.

Sasho's hand fell on his black bull whip. He sized Allison up and down. He sneered and gave a low inarticulate growl. He released the whip and touched a button.

The walls rose, the big oval room again surrounded them. With a toss of his head Sasho signalled to someone among the throng.

A moment later six brightly uniformed, hard-faced officers bowed over the rug, marched up to the throne, stood at stiff attention.

"Our ambassador from Mercury is not in the mood to make agreements today," said Sasho, oiling the rusty chains of his voice with mockery. "Take him with you on your flame-cloud jaunt —and see that he comes back all cheered up."

Almost before Allison had time to catch his breath, he found himself aboard the S-37, plunging through the skies straight for the earth.

CHAPTER V

Ironic Doom

THE S-37 was well loaded with Sasho's men—six dashing officers, several venerable old Cutthroats, and a number of bright-eyed young novices at the arts of murder and destruction, being rewarded for their progress by this gala excursion.

The eyes of young and old alike drilled Allison with a hungry, murderous gleam. To them he was a prize cake that they were forbidden to slice.

And how they would have loved to slice him! But he had to be returned whole to Sasho.

At first Allison had only the vaguest conception of what might happen to him before his return. The talk was hazy, ominous. He was in for something juicy, they hinted. He'd be transformed, he'd be purged of his conceit, he'd come back a piece of putty in Sasho's hands. And he'd go back to his Mercurian dictator and the militant millions with a nice little heartrending story that would win them over to Sasho.

Look how the Mars ambassadors had softened up—two of them had come through beautifully. The third one had got a chill in his belly and gone suicide on them. But what the devil, two scared emissaries had been enough to pull the Mars rulers into line. Yes, you're damned right, old Sasho's got technique!

Allison got a clear notion of what was coming only when one of the officers produced some newspaper clippings.

The black headlines were all over the front page. Officers and passengers gathered around while one of their number read the story with ribald glee. The paper had been picked up in America immediately after the first gas-flamer excursion of four months ago.

Through the bombastic uproar of the listeners, Allison caught the gist of the story:

METEOROID BLAZES PATH OF DEATH! . . .

Oct. 10 (Nationwide News).—Horrible death descended almost instantaneously upon hundred of thousands of persons today, when a swift visitor from the skies believed to be a gas-bearing meteoroid shot across three central states, accompanied by an explosion of unparalleled dimensions.

Cities and rural districts through a one-hundred-mile strip are tonight a vast mass of flames. Upwards of a million people have been made homeless. Aid is being rushed to uncounted numbers of injured, said to be in a state of living death as a result of burns and severe shock.

The nation's entire Red Cross and Army emergency resources are on their way to relieve the vast suffering.

Witnesses to the disaster vary in their accounts of the descent of the meteoroid. Some claim to have glimpsed a dark streak that raced across the sky from horizon to horizon. There is general agreement that a long bluish cloud boiled downward toward the earth's surface during the fifteen or twenty seconds before the terrific explosion burst.*

Astronomers are digging through records of centuries past, trying in vain to find a parallel for this rare stellar phenomenon.

The fires raging tonight can be seen from seven different states, glowing high into the heavens. Communication lines are practically nonexisent. A survey made by Nationwide News disclosed an unbelievable toll in human misery and farm and property damage, with bridges, state highways and telephone and telegraph lines literally wiped out.

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* This explosive gas is undoubtedly a powerfully concentrated refinement of gaseous, volatile compounds such as have reportedly been used in World War II. When the Nazis took the Belgian Fort Eban Emael in May, 1940, it is said that they used a super-powerful flame-throwing device, shooting highly combustile liquids or gases, which disintegrated concrete and melted the heavy siege guns.

At any rate, whatever method the Nazis employed, it seems certain that in future wars, gas will be used more to destroy enemy forts, gun emplacements and trenches than to burn out men's lungs, as in World War I.

There is little doubt that chemical warfare has far from reached its zenith of destruction. Nowadays, an invading army proceeds so rapidly with mechanized strides that the use of such gases as phosgene or mustard, to blind, cripple and asphyxiate enemy troops, is not only time-destroying but unnecessary.

But in the future, newer and far more deadlier gases will be found, which may even take the place of heavy armaments, at best expensive to manufacture and troublesome to service with gasoline and oil.—Ed.

THE officer who had produced the newspaper clippings pasted them on the wall of the cabin, so that everyone could have the savage satisfaction that the black headlines afforded.

"'Probable Act of God!'" the officer grinned, reading further. "What a wallop Sasho got out of that when I showed it to him."

There was more uproarious laughter, and someone wondered what kind of gag the earth newspapers would think up after *this* visitation. And what would they say when *another* excursion —the S-44—came within six hours after this one? And what would they say a few days later when Sasho turned loose his *whole fleet?*

"They'll think the end of the world has come!" someone roared.

"Which it sure has, for them!" another agreed.

There was one female aboard the S-37, a fluffy-haired girl who once might have been attractive. Allison learned that she had angered the Emperor by a trifling remark. Now she was being sent back to the earth.

The girl went from corner to corner of the cabin in tears of rage, and the officers followed her about, making no end of sport at her expense. They made her believe they'd been ordered to kill her. She fought when anyone came near her, and cried and cursed—

Plop! An officer pasted a handful of tape over her mouth. *Zip!* Another officer roped her, and tied her hands and feet, and they tossed her onto a bench. She struggled helplessly.

There was more talk of how best to murder the girl, and more roughhouse and horseplay. They grabbed her up and tossed her back and forth like a basketball, and bounced her against the wall—and then told her to cool off and take it easy and stop her blubbering.

Suddenly the pilot's voice came through the speakers, reminding them that they were well into the earth's gravitational sphere. The horseplay stopped. The officers unbound the girl, made her get into a space suit and helmet and parachute harness.

"Sasho's orders," said an officer. "Sorry to say, we don't get to kill you."

The officer explained that the girl had plenty of oxygen for a long fall—and she'd have a long fall! When she descended deep enough into the earth's atmosphere, the space parachute would open automatically.

The girl's send-off was a final volley of ridicule. They hoped she landed in mid-ocean or in a desert or in the top of a tall tree. She fought to the last, still deceived into thinking that she would fall to her death. The officers knew better. She would land somewhere in mid-North America, as Sasho had commanded.

She fell through the lock-equipped disposal chute, and that was the last that Allison or any of the others ever saw of her.

The officers turned their talents now to Allison. They removed his handcuffs, asked him what he was sore about, threatened to beat him to death. He knew it was simply a threat; they knew he knew, and it angered them. They felt an urge toward a fist fight. They cleared the center of the room and forced him into a brawl.

The first two officers went sprawling. Allison's arms concealed a surprising wallop. He had grown up on a farm and had developed a lot of hard-hitting energy. But the remaining four officers pounced in on him, and soon he went down under a battery of clubbing.

"We're s'posed to cheer him up, boys!" they taunted, laying on with blows. "Cheer him up for Sasho! Come on, you lads!"

The younger generation of passen-

gers piled in. Now and then one fell back, cooled by a near knockout. But Allison knew the best he could hope to do was to keep his face from being smashed to a pulp. He played defensive. Had he done more, his clubbers would have resorted to their weapons.

AGAIN the pilot's amplified voice interrupted the cruel roughhouse.

"We are approaching the earth. Time to get set for action!"

Order was restored on the spot. The officers straightened their uniforms, donned fresh orange sashes, manned their posts. The passengers crowded the rear windows. The big moment they had come to watch was drawing near. Everyone was tense. Eyes were alight with the glitter of cruelty.

Allison, again in handcuffs, smeared his bleeding face against his shoulder and tried to shake out of his grogginess. Things happened fast now. It was all he could do to catch the drift.

He heard the radio-telephone communication with the S-44, whose excursion would follow close on the heels of the S-37.

"Strike anywhere," the S-37 officials advised the other ship. "The American continent is big. Besides, we're six hours ahead of you. We'll be out of your way."

S-44 inquired where the S-37 would strike.

"We'll lay a strip along the Atlantic seaboard," the S-37 replied.

There was the daylight factor to be considered, and it was now morning along the Eastern coast. The S-44, following through six hours later, could cut a swath through the interior.

"We'll be a little slow getting back to Venus," said the S-37, "because we've got the ambassador from Mercury aboard. But we'll bring him to time, and then Sasho may as well give the whole fleet the go-ahead signal."

If these trial flights were as successful as expected, there would be nothing to stand in the way of Sasho's complete devastating revenge upon the earth—unless there should be dangerous planetary neighbors, such as the militant millions of Mercury, who couldn't be brought into line. "But you know Sasho!" an officer chuckled grimly. "He never leaves anything to chance!"

The eager excited radio-telephone conversation ended abruptly. The time had come for action. A slight cushioning of the ship's flight forewarned the entrance into the thin edges of the earth's atmosphere.

Snap! Zmmmmmmmm!

Allison knew that one. It was the motors of the tempo-system that combatted friction heat as the ship plunged from the void into air.

Snap! The usual heavy roar of the rocket motors went silent. Allison wasn't sure why, but for some reason the ship was to coast through a tangent to the earth's surface with no rockets firing.

They plunged on purely from momentum. The curve of the earth flattened out into a horizon. Distant cities rolled into view.

Snap! That one had Allison guessing. The pilot's hand drew back from the blue-knobbed lever, his eyes swinging to the mirror that looked through the rear of the ship. Every face, turned toward the rear of the ship, was tense with excitement.

Then Allison saw. Some unseen exhaust under the tail of the ship shot a stream of thin blue smoke—or was it gas?—down at the earth. Dangerous-looking stuff it was, almost transparent in the sunlight. It thickened as it sifted downward. The sight of it seemed to give everyone a thrill.

On and on it poured, flowing back in

an endless stream, a billion times more luminous than the trail of a sky-writing airplane. It strung out into a hundred-mile rope of seething blue cloud, lost over the rear horizon.

NOW the S-37 skimmed close to the ground, coasting against the stubborn forces of gravity and air resistance. Those manufacturing towns passing beneath were scarcely a quarter of a mile down.

The ship's momentum was almost spent. Allison flinched. At this rate they would crash into the approaching mountain range. Then—

Snap! Brrrwowrmmmmmm!

The rocket motors zoomed, the very earth leaped back. Out of its downward trajectory the ship shot. Cities, rivers and mountain range blurred into the distance. But the long cloud of gas—

The blaze of the explosion filled the whole rear vista. The onlookers threw their hands in front of their eyes. The flare pierced Allison's eyes like white-hot needles. It was as if the sun had splashed fire over the surface of the earth!

"Perfect!" an officer shouted.

Yes, the rocket fire had ignited the tail of the gas cloud! To Allison's horror, the explosion spread in a great fan-shaped inferno. The rocket ship itself was perfectly safe, of course, having leaped out of danger at the initial rocket explosion.

The pilot swerved the ship through a swift arc so that the passengers could look back and catch sight of the vast river of fire. It flooded over the horizon like a flying comet, eating the blue cloud as it went.

"Perfect! Perfect!" everyone shouted, and the ship was in an uproar of jubilation.

"How does the Honorable Allie like *that!*" the officers taunted.

As the ship circled back, the long line of black smoke and yellow blaze expanded into a grim picture. At a safe distance, the S-37 wove to and fro to review the extent of the artificial cataclysm. Sickening realization came upon Allison. Those heavier spots where smoke and blaze were the thickest were cities—homes and factories and automobiles and human beings, going up in flames!

"Another feather in Sasho's hat!" one of the youngesters cried. That was typical of the outlaws' hilarious spirit of achievement. With their inbred love of cruelty, the servants of Sasho boasted in glowing terms of wider applications of this method of attack. They visualized the glorious Sasho revenge that was near at hand. When Sasho loosed his whole fleet upon the earth in attacks like these, no known force could stop them.

Allison, listening to these hideous forecasts, knew that they were no exaggeration. The earth was helpless. Mars, according to what he had learned, had been talked into a defenseless position. And certainly Mercury, with a population of ten Earth folk, could offer no threat.

And yet it was the possibility of resistance from the imagined millions of Mercury that remained a thorn in Sasho's flesh.

The officers on the S-37 grew more confident every minute that they were gaining ground with Allison. The alliance was in the bag, they told each other. And in boastful tones within Allison's hearing, they considered what a simple matter it would be for their ships to spin down to Mercury's underground world, fill the caverns with explosive gas, and touch off a rocket. Very simple! One quick blast and the militant denizens of Mercury would

cease to worry anybody!

THE alliance was in the bag, all right. But just to make sure, the Honorable Allie must see more.

Moreover, the servants of Sasho had well-whetted appetites to view their achievements in detail.

The space ship eased down toward a burning city. Thin streams of people who had miraculously escaped death from the initial explosions raced in all directions, frantic to save themselves or others from spreading flames and collapsing walls.

The pilot of the S-37 sought out a perfect landing place, hidden from the turmoil—a long valley-like rock quarry at the city's edge. It was cluttered with stones and hoists and narrow-gauge tracks, but it was satisfactorily secluded. Sasho's crusaders preferred not to be seen.

"Keep your eyes wide open, Honorable Allie!"

Allison didn't need the command. His sharp eyes missed nothing. He steeled himself to the prospect of going forth to view the horrible shambles.

"Leave the airlocks open as long as smoke doesn't blow this way," an officer barked to the three or four men who were to stand guard.

Already the oxygen pumps were at work to bring the supply back to capacity. Unmasked and unencumbered by space suit units, the party marched forth.

The roar and crackle of flames, the stench of burning buildings and bodies leaped out to meet them. The invaders picked their paths warily.

They were undaunted by the screaming and screeching. Rather they were elated over it. This excitement was the emotion they lived for, and they drank it in to the full.

"Look at those dead bodies, Allie! Nicely blackened, don't you think?"

Involuntarily Allison jerked back in revulsion. The two guards to whom he was handcuffed allowed him to stop. Here was what they wanted.

In front of Allison was a small boy, sobbing his heart out. He had just crept out from under his overturned tin wagon. Miraculously it had spared him from death.

The boy was crying for his mother. Obviously she was the woman lying in front of him, clutching the handle of the wagon. But he didn't recognize her. And little wonder, for she was simply a mass of blackened, scorched flesh, her hair and eyebrows and clothes completely burned away.

The boy's eyes turned to a scrawny dying little animal that had been a kitten. He looked at it in horrified bewilderment. Its fur was gone, it was mewing pitifully. He couldn't understand what or why—

"Move back!" Allison's guards jerked at his wrists. The party edged back to safety. A wall was about to give way—

"But the boy!" Allison cried, tears of rage in his eyes.

The Sasho party laughed like demons out of hell.

"The boy!" an officer jeered. "He's an *Earth* boy, ain't he?"

The burning wall bulged and crashed, the boy and his kitten were buried alive under the fiery heap.

FOR the next five hours and more the party plodded among the fast-growing ruins, feeding emotionally upon this holocaust, its horror forever graven upon Allison's mind. Allison saw it all, but the picture that sank into his brain most deeply was the satanic gleam of the perpetrators' greenish faces, lighted by the leaping mountains of red flame.

Then the fates blew a mischievous

breath that descended upon every member of the party. It happened as the group wended its way back toward the deserted quarry that held their space ship.

Across the sky it came. They did not hear it. Before the sound could reach them, the thing would strike death.

To their eyes, it was simply a slim black streak shooting in a horizontal line a half mile or so above their heads. In its wake was a widening tail of blue cloud that spread and boiled downward.

"The S-44! It was to follow us in six hours. God, we've stayed here too long!"

"Run for the ship!"

"We can't make it!"

The swiftest runner in the world couldn't have escaped.

CHAPTER VI

Lonely Vigil

THE gloom that had descended into the rocky-red caverns of Mercury might have hung on endlessly, had it not been for June O'Neil's resilience. She came back at the tragic facts with almost superhuman courage.

They made her the leader. That was Smitt's and Mary's strategy. The responsibility was a stimulant, and June O'Neil assumed it with such a zeal that her eight followers would have been ashamed to admit their fears.

The first point upon which June insisted was that the postponed weddings must go through at once. No matter if it couldn't be a five-couple wedding. Her loss must not stand in the way of their personal happiness.

Not long after she had administered the marriage vows, June called the four young couples together.

"Our robot ship is dead," she said, her eyes turned toward the space ship runway. "But Lester isn't dead. I can't believe that they have killed him. They could have killed him here if they had wanted to."

All this had been talked over many times before. The conclusion had always been the same; Allison was a captive in some capital on Venus; but for what purpose, no one could say. Many hours equivalent to several Earth days had passed, but no hints of further attacks from the Venusian pirates—if pirates they were—had come.

June looked at her circle of comrades with steady eyes. "Can we build a ship that will get to Venus?"

The eyes turned toward the young boyish-faced Laughlin, who responded by drawing a bundle of diagrams from his pocket. The other men looked on proudly. Reams and reams of paper had been sketched upon during these recent days. June O'Neil's vision had been anticipated.

THEY ALL worked. The automatic Mercurian machines were cunning, the metals were marvelously responsive. Laughlin, in charge of the construction, was kept rushed to supply everyone with jobs they could do.

But Laughlin had a notion up his sleeve: It would be almost as easy to turn out every part in duplicate. Two space boats could be made almost as easily as one. The work went forward.

June stayed with the work almost beyond her strength. When it was time to rest and the others slept, she could not sleep. She would slip away from the laboratory living quarters, carrying her little three-stringed zither that Allison had once made for her, to play simple little tunes that brought her solace.

Always at such times she would watch the space ship runway, hoping—

waiting—praying—

Out of the electrically lighted laboratories and into the torchlighted runways, two red metal hulls were rolled one day that looked like massive streamlined bullets.

One of the ships was done! It was ready for a tryout. The other was almost completed. Their makers breathed with pride.

Those reams of designs had done something startling. Not so large as the robot ship, much smaller than the silvery-nosed pirate ship from Venus, these two boats were built for speed and solidity.

Laughlin believed that they were unlike any models ever seen before. The fine metals in their solid noses, together with their high speed, should provide them with a punch and a resistance to bullets that was almost beyond calculation.

AN Earth-made tungsten pile-driver, Laughlin said, would have been cotton in comparison.

Smitt gave the two ships the name of *battering rams*. Turn him loose with one of these boats, he said, was all he'd ask. He'd batter those pirates into pancake batter.

One mishap occurred on the trial flight of the first ship; it happened before the ship got out of the runway. It was gliding along the pathway when Smitt inadvertently snapped on the rocket motor.

Instantly he snapped it off—but in that moment the boat leaped, struck into the rocky wall obliquely, gouged out a thirty-foot cavern of living stone, and came to a stop with its nose buried. Smitt stepped forth with one eye black and the other gleaming with enthusiasm. If that wall had only been pirates!

They excavated carefully, and the powerful hull emerged undented! A battering ram it was, indeed!* Its makers were confident that whatever adventures the rescue of Allison might entail their two boats would prove skyworthy.

The test flights of both battering rams were successful, the tryouts being made within the space of four or five hours. Each of the men tried his hand at piloting. The radio-telephones were found satisfactory for keeping the two ships in touch during flight.

Last-minute preparations were made. As June O'Neil had insisted, all of them should go. They would lock the laboratories and camouflage the entrances, so that if there should be visitors they would find nothing.

June's plan was adopted only after much discussion. It would be a dangerous adventure at best, and the men felt that their brides might be safer to stay. Then they recalled the silvery-nosed S-20 and the arrogant, orange-sashed Venusian crew, and thought otherwise. Whatever the cost, they must hold their remaining group together. Even if they should lose their foothold in Mercury to chance invaders . . .

But June O'Neil did not decide for herself as easily as for the others. Secretly she planned to stay—*by herself!*

In the final hours of sleep before the

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*The Mercurian workshops originally developed by Jason Kilhide, the renegade Earthman whom Lester Allison had vanquished, were a marvel of mechanical ingenuity. Helping not a little was the excellence of Mercurian ores, the most plastic and yet the most durable ever mined.

Because of this fine mahinery and the excellent ores, the young men whom Allison had left on Mercury were able to construct fighter space ships whose hulls were so durable, any other space vessel could be penetrated like a hot knife cutting butter.

While metallurgists have been experimenting for years to make metals lighter and more durable, it is entirely possible that metals on other planets may be entirely different from any ores yet known. —Ed.

momentous take-off, June acted upon her rash decision. She left this note:

Lester might come while you are gone. I believe he would want me to stay here to keep watch over our stronghold. That is what I have decided to do. It is my choice to stay alone, and my wish that the rest of you go as you have planned to do.

When you read this note, you may want to find me, hoping to persuade me to change my mind. You mustn't. I shall hide where you can't find me, so please don't delay. I know that you will come back. I pray that you may bring Lester.

—June.

June stole forth, carrying with her the little zither Lester Allison had made for her. In the lonely hours to come, music would be a solace. She departed from the well-beaten paths, she left the torchlights and murmuring rivulets and adventured back into the endless depths, where the caverns were dark and silent.

The silence and the darkness were a little terrifying. She suddenly felt the loss of Lester Allison more than ever before. She listened for the distant roar of the space boats taking off. But she could hear nothing—nothing but the little hollow echoes of her own breathing or the slight touch of her arm against the strings of her zither.

Suppose something dreadful befell her companions! Suppose they should never come back!

All at once the awfulness of being left here alone *indefinitely* bore down upon the girl. How many stories she had heard of persons going insane from the unbearable lonesomeness, the horror of being trapped in empty caverns! Suppose Lester should not come back for years. Suppose—

NEVER before had June listened to inner voices or taken stock in hunches. With a strong flare for common sense, she discredited such things as silly superstitions. But now—

"Today I'm riding toward Death, June. I'm riding toward flames of Death . . ."

Again and again it came—Lester's words, his voice. No, it was all in her mind! It was Fear. Fear was melting her strong resolve. Fear!

She clambered over the dark rocks swiftly. Dim glints of light were in the distance. She would go back. She would still catch them before they took off. She must hurry. If she had only brought a torch—

Clack! Zinnng! The zither slipped from her hands. An instant's hesitation—one of those instants which can turn the fates of lives—

She groped to pick it up, lost her footing. Zither and girl fell together into an unseen pitfall that might have been made to order for a medieval dungeon. But June O'Neil had no thought of that. She was unconscious.

CHAPTER VII

Conqueror's Boast

SMITT and Mary stood at the entrances of one of the battering rams, reading June O'Neil's note for the third time. If it had been a bomb, it would have shocked no more.

As for the others, Redman and his wife came, bristling with enthusiasm for the take-off; they stopped, read the note, stood speechless. Then from the other ship came the other two couples, Laughlin and his wife, and Bob and Betty Wakefield.

The ships did not start on schedule. Smitt and Mary invented excuses for an hour's delay. No one needed to comment on June's rash action. All of them knew that her heartbreak was too much for one person to endure. Still,

it seemed dreadful to leave her.

But everyone of them respected June O'Neil. And if this was the way she wanted it, then they would comply. A last lingering look down the avenues of torches was fruitless. Motors had been roaring gently for several minutes. If June O'Neil had thought better of her decision, she surely would have appeared before this.

The two red battering rams crawled up through the long runway and charged out into space.

For a time the foursome in each boat were quiet and thoughtful. Venus seemed far away as it shone through the inky sky. The adventure ahead of them was nothing if not uncertain.

As the hours rolled on, they enlivened their journey by radioing back and forth. Smitt and Mary were at one radio-telephone; Bob and Betty Wakefield at the other. It became a game to switch wavelengths on each other and find each other again—a sort of radio hide-and-seek.

This game was still going strong when a strange voice leaked in.

"This is the S-44 returning. S-44 returning. Do you hear us, headquarters? This is the S-44 returning . . . S-44 . . . S-44 . . ."

Bob Wakefield's slight *hisst!* cut the battering ram conversation off abruptly. Smitt and Mary held their tongues. It had been agreed in advance that all official radioing to outsiders was to be done by Smitt. But this seemed a good time for silence.

For most of an hour both ships listened. The S-44, whatever it might be, continued to announce its progress, at intervals, without response from any headquarters.

Reception grew clearer. The bluish white ball that was Venus puffed out like an expanding balloon. Mary kept her eyes on the heavens. Out across the blackness she had watched the other battering ram, flying parallel with them since their departure from Mercury. Less than a mile away, keeping an even speed, it blazed like a tiny red bullet against the ubiquitous black velvet of the void.

Smitt stuck to the radio-telephone. Suddenly business picked up. An answering voice responded to the S-44 calls. Conversation took on a bewildering speed.

"Come in, S-44. What's the news?"

"Everything's okay. We cut a hundred-mile strip inland from the East Coast."

"Good. Hold on. I'll relay that to Sasho."

A short silence followed; then the headquarters voice resumed.

"What about the other ship?"

"Haven't they reported?"

"Not yet."

"Give them time. They said they'd be late getting back."

"When did you last communicate?" the headquarters voice asked.

"Six hours before we struck," said the S-44. "They were ready to lay a flame-cloud *down* the seaboard at the time, and—"

"HOLD on. Another call from Sasho." Half a minute or so elapsed. Then—"Sasho's all primed for action. He's ready to turn the whole fleet loose as soon as the other ship reports. You didn't happen to see their flames?"

"Hell, no, we cut down through a blanket of heavy weather. Not much chance anyway, the way we had split up the territory. We shot west. They had headed south."

"Okay, just so you both came through all right. The fleet's fixed up with a layout that will prevent any cross-ups."

"They'll have a fireman's picnic. Tell them we'll be down on their tails as soon as we can load up some more gas."

"They haven't gone yet. Sasho's still waiting on that Mercury deal."

Mercury deal!

Smitt blew a bomb of breath square into the transmitter. Luckily he had thrown the switch several minutes before. The mention of Mercury caught him gasping.

What was this all about? Cutting strips along the East Coast! Flame-clouds! Sasho! Gas! Turning the fleet loose! A fireman's picnic. And now—*that Mercury deal!*

"Hell, tell him to go ahead," the S-44 voice resumed. "The other ship's got that deal cinched by this time."

"That's what Sasho's waiting to hear. He's in a stew about it. Waiting for another round with that Allison fellow. He's getting the jitters. Says he smells trouble on that Mercury deal."

Smitt and his companions held their breaths. What a break! They'd blundered squarely onto a hot trail! Allison was alive! Alive and obviously much in demand!

"What do you want *me* to do about it?" the voice from S-44 drawled. "Head back for Earth and pick Allison up?"

On the instant Smitt took a long chance, snapped on his transmitter, barked,

"Where on Earth is he?"

Neither voice answered. There was something ominous about the silence. Smitt repeated his demand.

"Where is Lester Allison?"

Quick as a flash the headquarters voice snapped,

"Who said that?"

"I don't know," said S-44.

"Who called for Allison?"

"I did!" Smitt snapped back. "Where is he?"

"Who are you?" The headquarters voice sharpened to an urgent tone. *"Who's calling Allison?"*

Smitt snapped his transmitter switch off with a jerk. He had impulsively spoken out of turn and he knew it.

Into his receiver came a persistent clamor to know who he was and where he was calling from, and what business of his it was that Allison was wanted on Venus. The tones were threatening.

"Don't answer them!" Mary gasped; but instinctively she knew that the damage had been done.

There were minutes of silent panic in both battering rams. They seemed to be driving into something ominous. What was the unseen trouble back of those hostile voices?

Smitt shifted wavelengths and soon Bob Wakefield on the other battering ram found him.

"Bob Wakefield—"

"Okay, Smitt."

"Did you hear that talk that about Allison?"

"Yes."

"What did you make of it?"

"He's on the earth instead of Venus."

"Right. We're on the wrong track. Tell Laughlin we're changing our course this minute."

MARY saw the heavens swerve gently. The huge bluish-white mass of Venus passed off the nose of the ship and far out to the side.

Simultaneously the other battering ram turned. Had there been a traffic cop out in that realm of space, he would have seen the two sleek red bullets with their tails of fire cut parallel curves around him. Again they were off on straight unwavering lines. The tiny bright dot of the Earth was now their goal.

Smitt hastily returned to the S-44 wavelength. The mysterious talk between the returning ship and its Venu-

sian headquarters, though intermittent and sketchy for the next hour, was tense with gathering excitement.

Headquarters were much disturbed. Emperor Sasho was reported to be on a rampage and the whole Empire was holding its breath. Sasho was scheduled to broadcast an important pronouncement within another hour. It was believed that he would give the go-ahead signal to his fleet. And within a few days the Victory Festival would follow.

But strangely that certain ship hadn't returned. There was the rub. It was problematical whether Sasho would risk going ahead. After all his intricate plans for the timing and spacing of his attacks, and after all his glorious boasts to his Empire that the moment of luscious revenge was at hand, here was a slip-up. And from the guarded talk, Smitt gathered that a slip-up was a blowtorch to Emperor Sasho's pride.

But on top of that was the disturbing report that had made the Emperor wild and had set the whole capital in an uproar. Unidentified voices had come in over the radio-telephones—voices that inquired for the ambassador of Mercury! What could this be but approaching ships from the militant millions of Mercury?

Millions? Smitt found this talk wholly bewildering, not knowing of Lester Allison's original bluff.

The minute for the Emperor's pronouncement drew close. The S-44 communications had ended, the S-44 having arrived at the capital port. There were frantic last-minute efforts by headquarters to get another word from the mysterious voice that had inquired for Allison. Needless to say, both battering rams kept their transmitters switched off; but at their receivers, the eight occupants were all ears.

The designated minute arrival. Emperor Sasho was presented with a fanfare. His ugly voice grated through the speakers.

"The hour for the ultimate revenge has come! (Loud cheering.) You of the younger generations know what your forefathers suffered. Today the survivors of that gallant band of heroes sit before me. They have lived to see their powers multiply.

"In these coming hours, they shall see their Empire—your Empire and mine—strike back at that scapegrace of the Solar System—*the earth!* (A tumult of cheering.)

"No revenge was ever so sweet as this. The earth called your forefathers criminals. They *were* criminals! They would have been ashamed to be anything less than criminals *on the earth!* (Cheers!) The earth made them outcasts! The earth spewed them forth as if they were filth!

"But the fortunes of the universe have followed them. They applied their talents to the building of a new civilization—a civilization built on those sturdy principles of might and power and seizure—yes, and slaughter! The gods of destruction have served them well.

"Now they sit before me, these survivors of that original band, waiting to see what you and I will do in this, our greatest hour of opportunity. *What will we do? Will we burn the earth to a cinder?"*

A MOB of infuriated voices clamored,

"Hell-l-l, yes-s-s!"

"I, the youngest of the founders," Sasho's voice went on in a rattling throb, "am proud to be your Emperor! I am proud that you younger generations have taken the great ideals which the smug earth once branded as *criminal* and *cutthroat*—that you have made of

them a dignified and honorable philosophy of slaughter. *You are the hope of the universe!*

"You have tested equipment at your command—the most efficient machines of devastation ever made. You are ready to go forth and explode life off the face of the earth. At my command you will *clean up the earth!*

"*Did I say the earth?* Let me quickly add—the earth *and her allies!*

"I refer to none other than the *hordes of Mercury!* Let them come! Let them descend upon us by millions if they are able! We'll slaughter them on sight!"

There was a tremendous cheer. The clanking voice resumed in a low ominous tone.

"At this minute, the ships of Mercury are plunging through space to meet us. At this minute, we have good reason to believe, they are hearing my words. The Dictator of Mercury himself may be listening.

"For the sake of the record, let me repeat that my offers of a friendly agreement with Mercury have been refused. My efforts to set up trade relations—Mercury metals for Venus protection—have been scorned. The mischief-making ambassador of Mercury, treated to an excursion to the earth, has not returned.

"Mercury ships, are you listening? For the last time, wherever you are, have you any words for us? Answer me this minute—or you shall take the consequences!"

At their receiver Smitt, Mary and the Redmans looked at each other out of white, nervous faces. Smitt's teeth were set, his lips were tight. The impact of this colossal scheme of destruction beat down upon unsuspecting nerves with a shattering effect.

Fifteen seconds of silence passed. Then Sasho's voice jumped through the receiver in a high, screaming pitch.

"All right for you, Mercury! *Come on! We'll blast you to atoms!* I hereby command the flame-cloud fleet to go into action at once! Carry out the destruction plan to the letter! Whatever resistance crops up out of land or skies, *smash it mercilessly! Go! and the gods of slaughter be with you!*"

On toward the earth the two battering rams sped. The occupants were for the most part speechless. They had set forth simply to find Lester Allison. But the scene had widened. Gradually, as they rode the spaceways, their quiet tension changed from the silence of frightened rabbits to the silence of steel determination.

CHAPTER VIII

Nick of Time

AT the controls of the S-37, Lester Allison sped for Mercury as hard as he could go.

All the way he thanked the fates that had spared his life. It had been almost miraculous, so swiftly had it happened. The picture of that crucial moment still hung before his eyes.

Underneath the gray overcast sky, the blue ropelike death cloud had boiled down fiercely. Allison's party had dropped their cameras, weapons and trophies and bolted for dear life. His two guards had instantly unsnapped the handcuffs to free themselves for the chase.

The dash for the rock quarry where the S-37 had landed had been a futile gesture. The distance had been too great. Death had descended too fast.

But Allison's sharp observations of a few hours before had furnished him a trick. Something beyond that nearby embankment of pink stones had clung in his memory.

His wrists free, he had leaped for the hidden cut, set into motion the little four-wheeled car at the summit of the narrow-gauge track, shot down the long incline with the speed of a rocket.

The rest had happened almost too fast to be remembered. The four guards left with the ship had been completely befuddled at the sight of their party returning on the dead run. Allison had brushed past two of them, knocked down a third.

The fourth he had *caught*—within the chamber of the airlocks, for the airlocks had automatically closed the instant the flat of his hand had shot out against the throttle, and he had zoomed off into space.

An instant after the shock of take-off, Allison had looked back to see another hideous, fan-shaped inferno sweep across the landscape, its flare reddening the vast blanket of clouds overhead.

His own rocket fire had missed the descending gas, surely by not more than a few yards; but the S-44 many miles inland had touched off the explosion. It was sickening to think what must have happened to the rest of the S-37's "excursion," victims of the medicine they had dealt to others so gleefully.

Allison had at once set his controls for some idle circling on a safe side of the earth, and had taken some minutes for deep breathing. It was hard to realize that he had suddenly been freed of his handcuffs and had fallen into possession of a space ship.

But he knew he was not free in the fuller sense of the word. He was bound to a responsibility. He must warn the earth.

He had thereupon transferred his one passenger, a surly conceited, yellow-eyed guard named Siccola, from the airlocks to a small steel-encased room obviously designed for prison purposes.

Then Allison had gone back to the earth and had spent tense hours warning the governmental leaders of America. That gas-cloud explosion of four months ago, he insisted, and the two recurrences of recent hours, were not astronomical mishaps. They were trial attacks. They were forewarnings of a complete devastation planned by a deadly enemy on Venus.

The governmental leaders had listened open-mouthed. Some had fainted, some had been angered, one had succumbed to a heart attack, many had even laughed. But Allison had driven the message home, and the newspapers, radios, and alert governmental leaders had caught up the alarm to spread it like wildfire over the continents. The civilized world went into a panic.

"We've got to do something!" was the inevitable cry of a defenseless people.

THE earth suddenly realized that it was years behind the times in the development of space ships—and no off-hand avalanche of blueprints could make up for the wasted years.

Having done all that he could do in a few hours of time, Allison had sped away toward certain other responsibilities—personal ones that were near to his heart. He had a planet of his own to look after. And a people. And a sweetheart.

Had the Sasho Empire invaded Mercury during his four months' absence? That fear had accumulated in Allison's spine, and knotted his nerves and fatigued him for many days past . . .

The S-37 nosed down into the long dark runway, into the deep chasms of Mercury. Allison's eyes were eager.

There were the torchlights burning as brightly as ever, the red rock walls glowing. There was the red metal

bridge, the avenues into the distance. But there were no people.

Allison leaped through the opened airlocks, strode out into the light gravity, called at the top of his voice. No one answered.

He hastened to the laboratories. Keys had been left in the usual hiding place. In a shop he found the robot ship—thoroughly dissected! He found designs—reams of them, waste-baskets full; and on the shop walls was the final supreme design worked out in all its intricate details. One by one the items of that final plan had been checked off; and all around the shop were the evidences of building.

So they had built a ship and gone! But where?

Perhaps to Venus to find him? Perhaps to the earth from fear of more invaders?

Allison was suddenly tired. His prisoner aboard the S-37 had been cared for and was securely locked up. A host of worries flickered out of Allison's mind and he slept.

He awoke hours later, made hasty preparations to take off. The disappointment of finding no one here at the home base hung like a shadow over his thoughts. He supposed he would go to Venus. Strange, he thought, that June hadn't even left a message for him.

A moment of sentiment directed his feet toward the red bridge, down the torchlit path, up the circling stone staircase to the balcony where he and June had often sat together. Now this seemed the loneliest spot in the world. He must not linger. Whether June and the others had gone toward Venus or the earth, they would run into untold dangers.

Allison hesitated at the airlocks. He bent to pick up a scrap of paper. It was June's handwriting. He read it swiftly.

Lester might come while you are gone . . . I believe he would want to stay here . . . That is what I have decided to do . . . I know that you will come back. I pray that you may bring Lester.

—June.

Over and over Allison read it.

I shall hide where you can't find me, so please don't delay . . . I know that you will come back. I pray . . .

Up over the cavern paths Allison bounded, a flashlight in his hand, a rope over his shoulder. He called until he was hoarse from shouting. He deserted the well-beaten paths for the many-branched caves that were endless. Up near the cavern ceilings he called, only to hear the echoes of his voice mock him from distant underground canyons. Then he would wait in vain for the silence to give something back to him.

PERHAPS they had persuaded her to change her mind. She *must* have gone. These empty caverns held no living thing. No *living* thing—

The words stuck in Allison's throat. An unfamiliar coldness spread through his body. He forced himself back toward the ship, telling himself that he had looked everywhere—everywhere that June could possibly have gone—

But there was another cave he hadn't explored—and there was another ravine—and another . . .

Hour after hour Allison searched and called. Time after time he started back, only to be stopped by an intangible something. Sometimes he thought he heard faint sounds somewhere out in the blackness beyond the reach of his light. Not the sounds of a voice, not the clatter of a rivulet beating over stones—something fainter, more musical, like the almost inaudible

hum of a tiny insect.

Hmmmmmmm! Hmmmmmm! The sound melted away into nothing . . .

There it came again, a perfect tone—and another, slightly higher! Where did it come from? This way and that Allison moved quickly. The subtle tones were closer now—and there were three of them—three delicate harmonious notes of a stringed instrument! The zither!

"June! June!" Allison's voice was no more than a clogged, croaking whisper. "June, where are you?"

His ghastly call echoed away into the blackness. No voice answered. Silence—then it came again, as clearly as if it were resounding through a speaker! *Hmmmmm — hmmmmmm — hmmmmm!*

A few more steps, then Allison's light flashed down over an abrupt break in the rocks. The caprices of nature had formed a trap—a triangular dungeon-like pit as deep and straight-walled as a cistern. The flashlight's beam found a white form lying limp on the stony floor.

Allison looked down upon the most pitiful and at the same time the most beautiful face he ever hoped to see.

June O'Neil's eyes were almost closed. Her dry swollen lips were open. Her clothes were in shreds, her fingers were torn and clotted with blood. One limp hand weakly stroked the battered little zither that lay beside her.

In a moment Allison had her in his arms, was whispering to her.

CHAPTER IX

The Long Chance

"YOU poor child," Allison breathed. "So you stayed—for me—"

A slight movement of her white eyelids and a barely perceptible smile that touched her lips were all the response she could give.

Lifting her out with the aid of the rope, which he had knotted into a sort of ladder, Allison carried her to the nearest rivulet. She was near to dying from thirst. Many an hour must have passed since her fall. He wondered if she would live. Gently he bathed her face and her limp body.

An hour later, lying on a cot in the great Mercurian laboratory, she lifted her arms up to Allison and spoke to him, smiling through tears. Those tears looked good to Allison. He knew she was feeling better.

Though the memory of the interminable hours of darkness she had spent in the trap haunted her mercilessly, June O'Neil was quick to regain her strength.

Soon she was able to tell Allison everything—the anxiety of the little Earth group to go to Venus after him; the troubles with the robot ship; the swift hours of work through most of four months, which had at last evolved the two battering rams; her own fateful decision not to go; her fall, the blow against her head that had struck her unconscious, the terror of awakening in the blackness—trapped!

And finally, June concluded, the frantic efforts to break stones from the wall and to carve handholds—only to be overcome by sickness and exhaustion and thirst.

Allison smoothed her hair. She must think no more about it; she must rest, sleep, gain back her strength.

"But you haven't told me a word of yourself, Lester."

As Allison gave her his story, June O'Neil's eyes opened wide.

"And this person Sasho," she said, "will he actually go ahead with such a plan?"

"By this time he is probably starting his whole fleet into motion."

June was alarmed, but even so she was in no state to imagine the stupendousness of the thing.

"What will the earth do?"

"I'm afraid it's too late for the earth to do anything."

The girl drew herself up on one elbow and looked at Allison intently.

"What about Mary and Smitt and the others? What will happen to them?"

"I don't know."

"What are *we* doing here?" June's voice rang with alarm.

"Waiting for you to regain your strength. I'm not going to leave you again—"

"I'm strong already! And I can gain as well riding through space as here." Firm purpose glowed in the girl's youthful face. "Carry me aboard, Lester."

THEY WERE off.

In addition to their one prisoner, Siccolo, whom Allison had already had aboard after his escape from earth in the S-37, they carried a heavy cargo of molded metals—articles which the automatic Mercurian machines had turned out by the thousands while Allison had been searching for June. During the hour that he had entered the laboratories, he had set the machinery to humming. It was only a crude hunch, he had told himself, but the effort required was so slight that it was worth a try.

"Anyone in the world that makes trouble for Sasho," Allison told June, by way of explaining his curious cargo of hardware, "is doing mankind a favor."

ALLISON set the ship for a straight hard course toward Venus. June walked about on unsteady legs. She surveyed the roomfuls of red metal spears, swords, helmets and shields. There were even a few of the black metal axes which had been left over from the original Mercurian civilization. June wondered if Lester had gone out of his head.

Allison grinned and said he didn't know, perhaps he had. But these were weapons that the machines could turn out most easily and they were weapons that anyone could use. It was his theory that the very possession of a weapon can make a frightened creature bold.

"I hope we can find a few thousand men who'll take a fancy to red hats and sharp spears," he added.

A few hours later, when the S-37 hovered among the silvery clouds high over Venus, June gazed down through the high-powered telescope and saw the few thousand men that Allison had in mind.

Though these people were too far away for their green faces to be seen, June could guess from their primitive-looking mountain camps that they were the hordes of Venusians whom Sasho's cutthroats had robbed and driven off. The Jagged Mountains, their stronghold, was many miles removed from the blue-domed cities that dotted the vast panorama and were now in the hands of Sasho.

"Any activity?" Allison asked. He was busy at the controls, cruising at the lowest possible speed.

"They seem to be holding conferences," June replied. "Do you think they have radios?"

"In all probability."

Radio broadcasts from the Venusian military headquarters were going strong. From the moment the S-37 had come into listening range, June and Allison had picked up messages.

The first thing they had heard was some last minute instructions of no par-

ticular importance to the departing S-44. The important thing to Allison was that the S-44—the ship whose flame-cloud had unwittingly caught the crew of the S-37—was starting back on a second trip.

Every other ship was gone now, the messages implied. There was a hint of disturbance over the missing S-37, otherwise things were going well. But to make sure they continued to go well, the S-44 was loaded with high-ranking officers who would supervise the fleet's return.

There were numerous other messages, all of them charged with the war spirit and anticipation of the greatest, most complete, military victory in history!

"The Sasho Victory Festival begins today!" boomed a stock announcement every few minutes. "Your attendance is your declaration of allegiance to the Sasho Empire! Your absence brands you as a damned rebel!"

Allison groaned. "No wonder those green-faced Venusians are holding conferences all over the Jagged Mountains. If they venture toward any city to take in the Festival, they'll probably be caught and turned over to the Cutthroats and shot. But if they don't show up, they've branded themselves for life as 'damned rebels'."

Allison looked at his stacks of spears and swords with a sigh. He wished they could have been automatic guns. But the green-faces would run at the sight of a gun, no doubt. Getting spears and swords into their hands was going to be difficult enough—and perhaps futile, at that.

"A large group is heading toward that central plateau over there now," June called down from the observatory through the speaking tube. "You've got plenty of time to get there ahead of them."

IT was a difficult task of piloting for Allison, novice that he was, but within a few minutes he achieved it, landing on the central lookout plateau. Then came the strenuous job of unloading. He wished he could have forced Siccolo to help him, but that yellow-eyed prisoner was not to be trusted outside his cell.

The weapons were stacked in gleaming red piles. Allison had almost finished when the approaching column of green-faces came into sight a quarter of a mile down the trail.

They saw the space ship, turned tail and ran!

"No use trying to reason with those boys," Allison growled disgustedly. "They only understand two English words: *'damned rebel'*."

Allison took off as quietly as possible. He and June looked down from the high cloud level. What they saw through their telescopes was disheartening. The party of Venusians had switched to a different trail. They feared a trap. All those fine metal weapons might lie untouched forever.

"If they only knew we were their friends," June sighed.

"Too bad. They'll eventually fall before Cutthroat bullets. They could at least go down fighting if they only knew. It's a cinch no Sasho bullet would go through one of those red metal shields."

But Allison's efforts were apparently lost. Messengers sped through the mountain trails from one green-faced group to another, obviously to warn against trouble from the skies. Allison steered back toward the open skies high above the blue-domed Sasho cities.

"What could have become of our two battering rams?" June asked, continuing to scan the vast landscape.

"Perhaps captured," Allison answered quietly.

It was a dark moment. June sensed that for once Allison was uncertain which way to turn. The earth was a lost cause! The two battering rams containing the nearest and dearest friends in the world—the four young couples from Mercury—had doubtless gone to their unknown doom!

June, acting upon her womanly instincts, went to the supply cupboards and brought forth food. Nothing was so full of inspiration as calories, she said.

Allison returned her brave smile, kissed her. For a brief moment his thoughts flashed back to the wedding that had been postponed. He did not mention it, for all too obviously he saw that that lost hour would never come back. They were in the Sasho maelstrom now. It was up to them to gamble against the fates to the last—and that course certainly led to death.

Suddenly something came in on the radio-telephones that set Allison's imagination aflame. It was a message from the Venusian headquarters — an answer to a clamoring public.

Don't be alarmed about the rumored invasion from Mercury, said the reassuring voice. (So Allison's story of Mercury's millions of warriors had taken root!) The rumored voices from Mercury ships had been heard no more, the broadcast continued.

And Allison fairly shouted, *"Voices!* Could that have been Smitt and Laughlin and—"

June nodded eagerly. "Oh, thank God they're safe!"

The Venusian announcement continued:

"Either the Mercurian report was a false alarm resulting from a confusion of messages, or else the invaders were bluffed out. Nevertheless the spaceship defense guns are keeping a close watch on the skies."

At these words Allison automatically rocketed high out into the heavens. True, his ship bore a safe name, the Sasho-37, but the Sasho gunners, if they sighted a boat that hadn't radioed in, might not stop to read names.

"What now?" June asked in a heartening voice.

"Back to our green-faced natives," said Allison. "We'll try again. There was inspiration in them thar calories you served up," he added with a tight grin.

HE set the controls to circle safely and turned to an equipment cupboard.

"We've got a bunch of space parachutes here. We may as well use them."

As a matter of ordinary precaution, they had already donned space suits and parachutes and had placed oxygen helmets within easy reach. But there were twenty-five or thirty more parachutes—theirs to throw away. That was Allison's inspiration.

He coasted down to within a mile of the tops of the Jagged Mountains, applying counter-motors to slow the ship down almost to glider speed.

At his direction, June threw the parachutes away by way of the disposal chute, one after another. Each parachute was attached to a bundle of red metal hardware—a sword, a spear, a shield and a helmet. Luckily Allison had kept a few of each.

The third parachute fell true. It deposited its bundle in the very center of an unsuspecting group of green-faces. Their surprised faces looked up to see the cascade of red bundles on their way down. The line led directly to the central plateau, where Allison had previously unloaded and stacked thousands of weapons.

"There," said Allison. "We've told

them we're friends in language plainer than English. Now if they only had a husky fellow about the size of Sasho to use for target practice, they'd be the happiest rebels in the world."

"Good work!" June smiled. "What next?"

"Up into the skies before a telescope spots us."

"Then what?"

Allison took a deep breath. The headquarters radio messages continued to pour in. The Sasho communications staff was stewing for a word from tardy ships.

"Willing to take a long chance? Even though the payoff might be final?"

June nodded.

"We don't have much to work with," Allison observed. "But we've got a Sasho ship and plenty of fuel. And we've got you.

"What can *I* do?" June exclaimed.

"Maybe you can lie," said Allison. "Lies have been my most useful weapon the last four months. Can you?"

"I—I'll try," she stammered beathlessly.

"Okay. We've got a ship, *two* willing liars, a radio transmitter, and a yellow-eyed Sasho officer who's getting tired of his cell. We'll begin by putting Siccolo and the transmitter together!"

CHAPTER X

Fires of Rebellion

ORANGE and silver banners blazed from every blue dome, every public square, every stadium throughout the Sasho cities of Venus. The stadiums and amphitheaters filled rapidly. Throngs of excited, expectant people streamed in from the hinterlands.

Over and over the announcement boomed through thousands of amplifiers:

"The Sasho Victory Festival begins today. Your attendance is your declaration of allegiance. Your absence brands you as a damned rebel!"

Every Sasho stadium contained a four-sided silver tower in the center of the grounds. From each side of each silver tower the televised face of Sasho looked out upon the crowds. From time to time, the voices of officials blared forth from the orange horns that topped the silver towers.

Soon now a volley of fireworks would spurt from the top of every tower, signifying the return of the first ship of the flamer fleet. Then everyone would rise and salute, and the televised face of Sasho would speak and his incomparable voice would thunder from the orange horns. That was the declaration of victory for which everyone waited.

The biggest crowds, of course, were massed at the Capital Stadium. There they could see the real thing—Sasho himself, his bulky head and hunched shoulders looking strangely small in comparison with his gigantic televised image. He and a few other officers occupied the little open platform near the top of the stadium's silver tower.

Here at the Capital Stadium, the eyes of the multitude tired themselves out gazing into the skies. The space ships must return soon. One by one they would fly down out of the mysterious nowhere, bearing proof that Sasho's great plan had been fulfilled.

The flamer ships would return as they had left, twenty minutes apart, as Sasho's time was reckoned. And—thrill of thrills!—they would coast right into the center of the Capital Stadium, one every twenty minutes, each to receive fitting recognition from the mouth of the Emperor.

At first the waiting was not wearisome. Some cruel sports had been

planned to keep the crowds entertained. Silent airplanes sewed back and forth, portraying the flamer fleet's attacks upon the earth. An explanation of the careful clockwork plans was given.

To the multitude's delight, a touch of realism was added to prove how effectively the gas-clouds could destroy. A specially built plane spread a tiny cloud through one avenue of the stadium, where a few captive green-faced rebels had been placed to represent Earth people.

Ignited, the little cloud barked out a vigorous explosion. The flash of fire was accompanied by many a startled, agonized scream from the victims. Then the crowd saw how quickly and efficiently the purpose had been achieved. Every green-faced rebel's clothes was a mass of flames!

Cheering throngs and blaring bands, freakish sadistic demonstrations and parading young warriors all did their best to keep that handsome smile of victory on the Sasho face.

But the Sasho smile was not at top form. It came and went with bewildering rapidity. It came with effort. Then the big chin would shoot upward, the twisted lips would spread to show angry teeth, and the head and body would quickly turn, as if in answer to some pressing business.

BACK of the scenes all was by no means well. The first of the fleet ships should have radioed in by this time. But no report came.

"Keep up your calls," Sasho muttered.

On the headquarters wavelength the agitated demand continued.

"Come in, Fleet Ship Number One. Come in, Number One! Where are you, Fleet Ship Number One? Do you hear? You should be within an hour of port, Fleet Ship Number One . . . "

Sasho's irritation grew into ill-suppressed rage. Troubles always seared his pride. A slip-up! And this was the supreme event of his life.

The audience began to get restless. It clamored for more demonstrations.

"Call the hinterland guards," Sasho ordered one of his three aides. "Have them pick up some more green-faced rebels and send them in by plane, *pronto!*"

The aide flashed a dubious eyebrow.

"Well?" Sasho roared, inflamed by his assistant's hesitation.

"There's been some border trouble in the last few minutes," said the aide. "Three guard stations have been attacked—"

"Attacked! By Rebels?"

"And the guards have been routed. I've already ordered reinforcements, several motorized reserves—"

"Rebels! Rebels! How the devil—" Sasho was enraged. This was beyond u n d e r s t a n d i n g. He squirmed about, wanting to strike someone with his quirt. But the mirror in front of him caught his eye, reminded him to smile. He forced a half-hearted grimace and quickly turned away.

"Why the hell wasn't I informed?" he snarled.

"You've been very busy," said the aide, "referring to the fleet.

The reminder shot pain through Sasho. He turned to another aide. Any messages yet from returning ships? The aide had none. He'd continued to keep in communication with headquarters, which continued to call.

The third aide delicately hinted that the crowd was sensing a delay.

Sasho bestowed a prolonged smile upon his empire, at the same time rasping from the corner of his mouth,

"For God's sake, think of something!"

"A speech might be in order, your Majesty," the third aide suggested timidly. "Perhaps a review of the empire's history—the story of your own spectacular career—"

For an instant Sasho was sorely tempted. If he refused a chance to tell the story of his rise, beginning at the age of ten, it would be the first time. But his disturbance over the delayed fleet was too deep. Something had gone wrong. He was sure of it. He should have gone along and supervised the attack himself. Perhaps that idle rumor about Mercury wasn't so idle—

"Another report from the hinterlands, your Majesty," said the second aide.

"Hinterlands, the devil! What now?"

"The rebels have formed a front, your Majesty. They're advancing from the mountains."

"Advancing! The rats are mad! They haven't got anything. I'll turn the Cutthroats loose on them—"

"Your Majesty, the Cutthroats went with the motorized reserves. They're already in the thick of it—"

"*Thick* of it!" Sasho blasted. "You talk as if there's some real fighting."

"Half the Cutthroats are reported slaughtered—"

"H*pffff!*" The Emperor blew up like a steam boiler. He swung his quirt and cut a mark across the second aide's mouth. He drew back for a second blow when he caught sight of himself in the mirror.

"A ship!" the first aide blurted. "A ship's just radioed in from a half hour out."

Sasho turned to the mirror and mustered his most gracious smile.

"Go on," he muttered savagely. "What have the damned tardy louts got to say for themselves?"

"It's the lost ship," said the aide, "the S-37."

"*Gimme that phone!* Headquarters! *Put me on that ship!* Hello, S-37! S-37! *Siccolo!* Well, I'll be a fried corpse! What the hell brings *you* home?"

All that the crowds throughout the Sasho Empire could see for the next few minutes was the televised shoulders and back of their Emperor, but every jerk of his sleeves and epaulets seemed to shake the warp and woof of their social structure.

Fresh rumors spread through the crowds. The fleet that had gone to destroy the earth must have met with unforeseen troubles. Perhaps the ferocious millions of Mercury *had* materialized! Perhaps—terrible thought—they would invade Venus!

If so, would they stop at nothing? Or would they only assassinate the higher Sasho officials?

On top of these wildfire speculations, another rumor raced in. The green-faces—the original Venusians—were coming down from the hills in mad hordes. They were advancing like wild men. They were killing and butchering every man who wore a silver-and-orange uniform. They had brand-new, brilliant red weapons—

What was happening to the Sasho Empire?

Many a stony green-faced countenance that had been expressionless for years suddenly lighted with a gleam of hope. If these things went on, that long-dreamed-of time was near at hand—the time to throw off the tyrant's yoke!

"Speak up, Siccolo!" Sasho roared into the phone. "I want the facts! Mechanical difficulties, huh? Working perfectly now, you say. What about the Mercury ambassador? Still with you! No signs of any Mercury ships?

Well, by God, there's a hitch somewhere! The fleet's hours behind schedule. Ships ought to be pouring in, and not a one's showed up . . ."

Siccolo replied that the fleet was doing fine but was behind schedule, owing to circumstances which he would explain in more detail later.

"Doing fine, is it?" Sasho cursed a bit more softly. If the plan was going through, he could breathe easy. All this petty trouble with rebels and restless subjects wouldn't amount to anything. A victory over the earth would put everything back on an even keel—

"What's that, Siccolo? You brought me a present? *A girl?"*

Sasho's eyes roved past his aides, busy at their troublesome telephones, to the swarming multitudes—vermin, hungry for excitement! Waiting for the return of victorious ships—ships that would be hours late . . .

Humph! A girl, huh? A present from the earth . . . Mmmm!

Sasho was suddenly bored by his surroundings. He wished the Victory Festival were in the opposite corner of the universe. Why not walk out on it? He was Emperor, wasn't he? What the hell's the good of being Emperor if you can't do as you damned please!

SASHO barked back at Siccolo, "Girl? Put her on!"

A moment of waiting, then, "Hello, Mr. Sasho!"

"Say that again!"

"Hel-l-l-o-o-o, Mr. Sasho!"

Damn, what a voice! *What* a voice!

"Coming to see me, are you?" Sasho wished he'd equipped these ships with television.

"I've heard *so* much about you, Mr. Sasho!" the voice cooed.

"Hmmm. Don't you believe none of those stories. Ha-ha! I can tell you worse ones myself. Ha-ha-ha!"

"I thought maybe you'd like to ride down to the earth. It's awfully exciting, with all those fires and so much fighting—"

"Fighting!" Sasho growled. "What fighting?"

"*You* know—your fleet men, grabbing parts of the earth for themselves, and your officers—"

"WHAAA!" Sasho nearly blew the phone out of his hand. "Put Siccolo back on!"

"Is that ride a date, Mr. Sasho?"

"Put Siccolo back on! . . . Siccolo! What she said—is it true? . . . A regular dog fight; The hell you say! . . . Officers, too? . . . You *lie,* Siccolo! Why, the low scummy devils!"

Siccolo's words continued with such precision that he might have been reading them.

"Would you like to see for yourself? Perhaps you could stem the tide—"

"Chase yourself down here the quickest way! Refuel first, if you need to. I'm in the stadium, and I'm ready as quick as you can get here! Rush it!" Sasho snarled.

To the consternation of his three aides and his corps of guards, Sasho slammed down the telephone, bounded for the enclosed stairway, chased himself up and down it for the next several minutes, hissing,

"Revolt! Revolt! Revolt! I'll hang 'em! I'll fry 'em! The dirty lice—"

A wild cheering rang then through the stadium. The majestic S-37 rolled into the grounds and up to the silver tower.

Without a word to his breathless Empire, Sasho marched straight for the airlocks, entered. His three aides were directly behind him. A corps of guards tried to follow—

The guards didn't make it. The air-

locks swished shut, the S-37 zoomed off. Out into the skies, out of sight!

Clamorous uproar shook the stadium. Pandemonium seized the scores of stadiums throughout the Empire as a report of this unaccountable action came over the air.

"More trouble on Earth!" a frightened official boomed out over the Empire's system of speakers. "Sasho's been called on an emergency. Earth trouble. There'll be a slight delay—"

Hooting voices drowned the speaker. Earth trouble! Yes, and Venus trouble! The fires of discontent that had cropped out today would not be put out tomorrow—nor the next day—nor the next!

CHAPTER XI

The Final Stroke

SEVERAL hours earlier the earth's most spectacular sky show had begun with a bang! And *what* a bang! The hard claps of thunder reverberated through city buildings like a minor Earth tremor.

But the bangs were not placed where the Sasho flamer ships meant to place them. Every bang went off prematurely—miles up in the air.

The North American continent watched, held its breath, wondered whether these two marvelous little red battering rams from Mercury could keep it up.

Every twenty minutes another terrific explosion occurred. Gradually the scene shifted, east to west, across the broad continent.

Every twenty-minutes the short-wave radios picked up the routine messages of the approaching attackers.

"Ship Number Seven calling Ship Number Eight.

"Okay. What's the report, Number Seven?"

"Ship Number Six reported twenty minutes ago. It descended on schedule. Its flame-attack was visible soon afterward over area Number Six.

"Okay, Number Seven."

"We're cutting into air over Area Number Seven. Our flame should be visible shortly."

"Do your worst, Number Seven. We're twenty minutes behind you, descending on Area Number Eight on schedule."

IT HAD been terrifying business the first time, especially for Mary Smitt and the Redmans. But Smitt had been thoroughly nerved up to it. He had missed Ship Number One on his first two trials; but the third time he had sped by it, he had caught onto the system.

He had shot ahead, looped back through a full cloverleaf turn, and his electric-eye detector had taken care of the rest. They had smashed squarely through the nose of Ship Number One. It had fallen apart as if it had been so much tissue paper.

A quick glimpse, and the story was all over. They could look back and see the vast gas flames leaping out in all directions like an exploding star, as the disintegrating Sasho ship blew up.

Reports from the earth observers were that a few splinters of metal and bits of uniformed bodies hailed down after every explosion. Mary winced, but her companions reminded her that these were the fleet ships that had been ordered to fry the earth to a cinder, blast any interfering Mercury ships to atoms!

Blast Mercury ships to atoms! What a laugh Smitt had out of that. Ship Number One had bounced three shells off the hull of his fighter and he had hardly felt the jar.

In the other battering ram, Laughlin and his wife and Bob and Betty Wakefield followed the scene of action close to the surface. They kept in touch with Smitt by radio, but their offers to take over the ramming job were refused.

"Not a chance," Smitt would retort. "I've got my system. You might miss one learning. Keep up your search for Allison. He's got to be on the earth somewhere."

"But you'll wear out if these attacks keep coming—"

"Wear out, hell! This is recreation! I haven't had so much fun since that Fourth of July when my Uncle George forgot to lock up his dynamite. S'long. It's time for another ship!"

ONCE during the siege, the two battering rams arranged for a trade, and Smitt took off in the fresh boat. His original fighter had begun to feel the crashes. But after the shift of passengers, Smitt flew back into action. The crashes went on with the very superb clockwork that Sasho had so carefully planned the other way around.

"I'll bring down everything that comes down out of the sky!" was Smitt's last communication before his radio went dead.

It was just one of those many jolts of busting through the nose of a Sasho ship that queered the radio. And no one had time to fix it. But that made no difference, for Smitt and his party had learned that they could spot the approaching enemy miles above the stratosphere.

"We're doing a thousand percent," Smitt grinned fiercely, "and we're gonna keep that batting average pure!"

He shot along past a ship emblazoned S-44—the ship bearing Sasho's principal staff officers! A few seconds later the S-44 was nothing but a memory and flying splinters!

There was a long wait before another ship came, but eventually one did come, and Smitt's party sighted it speeding down toward the stratosphere.

SASHO'S EYES screwed up, his jaw jutted, he laughed through his yellow teeth. It was the laugh of a demon. He strode forward, brushing past the two aides who had entered the ship with him, and who now held guns on Lester Allison and June O'Neil. The third aide had taken over the controls.

"Out with it, you lousy Earth worms! How were you going to kill me?" Sasho snarled.

Allison pressed his lips tightly. Things hadn't gone so well the last few minutes. As long as he and June had been locked in the control room, they had been all right. They had kept the ship rocketing for the earth at top speed. Dressed in their space togs, their backs turned to the cabin beyond the transparent partition, their identity had been concealed.

But as soon as Sasho and his aides had pranced through the ship from end to end, finding no one, not even Siccolo —whom Allison had dropped off safely on Venus—the storm had broken.

The transparent partition had not been immune to bullets. Allison and June had come out when they were ordered to do so. That was as they had planned it. They would have to come even if the aides hadn't crashed two shots through the partition.

They had advanced with their hands up, the aides had relaxed a trifle; then Allison, his hands still reaching, had caught a gun from over the control-room door.

That was as he had planned it. But he had not planned for the gun to jam. At the moment he would have taken the situation over with gunfire, a sterile

click! let him down!

"Don't tell me you'd have let me off with shooting!" the irate Sasho roared. He snapped his quirt against his silvered boot.

How Allison would have killed Sasho, had the best of luck been with him, had been the least of Allison's worries. Probably he would have dispatched him the quickest way. Certainly he would never have turned the man loose upon the world, even as a prisoner, once he had him.

"Don't tell me you'd have done me up in a hurry!" Sasho taunted. "I'm not gonna do *you* up in a hurry! I'm gonna have a fancy bit of sport with you—both of you."

The flash of Sasho's eyes at June was chilling to the blood. Allison breathed hard.

HE remembered suddenly that he had once slid a few black Mercury axes beneath a bench in this middle compartment. He wondered if the aides would get careless with those guns in time, if he played the game right.

June's arm trembled slightly against his own. Sasho paced the floor. And Allison stood like a statue.

It was far more than two lives that hung in the balance—June's and his own. It was the fate of three planets. From what Allison had gathered of the Venus situation, he surmised that Sasho's triumph or failure would make or break the Empire. That realization had given Allison his strategy. If only he could throw a monkey-wrench squarely into the machinery of Sasho's horrible scheme—

"Come out of it, you skulking rat," Sasho seethed. "If you've got any last words for your dictator, out with them! I'm gonna go down and pay him a visit before long—him and his metals."

"Tell him," said Allison in a cool defiant tone, "that it was my last wish those metals be used for a solar defense machine for peaceful nations—a defense machine that would crush men like you to dust!"

Snap!

Sasho's quirt cut a thin line from the top of Allison's forehead down toward his left eye. It must have struck a burning blow that partially cauterized, for the cut hardly bled.

June's breast rose and fell deeply. She clung as if by her fingertips to a faint wisp of blind unreasoned hope that they might live through this hour. *If* they did—and *if* that line across Lester's forehead should remain a permanent scar, June knew she would always be proud of it.

Again Sasho paced the floor. He had never been in a more dangerous mood than this. Though he was thoroughly jubilant over having exploded the revolt bubble, he was thoroughly enraged over having been taken in by Allison's scheme. But above all, he was hotly disturbed about his fleet.

After all, the only trouble he had scotched was a fake one—that of traitorious ships and officers. But where were those ships? Why couldn't the radio get in touch with them?

A few hours later he came down from the observatory with an easier jog and a surly, secretive smile. He had seen a few explosions, so he thought, through the telescope. One of them he had been certain of. Probably that had been the S-44 delivering the final blow. He regretted that the S-37 had no flame-gas aboard.

An inspiration came to him on the matter of taking care of Allison and June.

"I've missed out on all the big explosions," he grunted, "but there'll still be fires, plenty of them. And I've got a

notion I'd have more personal interest in these fires," here he stopped and glared at the two prisoners, who sat across the room from their guards, "if I just knew some of the folks that were in on them!"

With that plan of action in mind, Sasho smiled cynically enough to forget his bigger worries. He checked over the space suits and parachutes that June and Allison wore.

He'd let them float down into the thickest blaze he could find!

AS they neared the earth, Sasho became disturbed because he couldn't locate any strips of flame. His aide at the radio tried in vain to tune in some unseen Sasho ship.

"What the devil!" the aide at the radio muttered. "The short waves are screaming all over the place, trying to locate Allison!"

Sasho took the phones and listened. He laughed like a sandblast. He tuned in the transmitter and bellowed taunts back at the earth announcers.

"This *is* rich! Your prize is already taken, numbskulls! I've got him and his girl friend right by the nape of the neck. If you want to see them, you can see them in hell in a very few minutes! . . . Who am *I?* I'm—" Sasho stormed with laughter. This was too good. "I'm the Emperor that's just got through fryin' the Earth's pants off. I'm Sasho, by God!"

He roared his laughter into the transmitter. Then with a stroke of irony that was exactly to his taste, he said:

"Maybe you'd like to have a chummy little talk with Allison before his hair burns off and his toenails curl up? Yeah? Come here, you damned rat! Tell your friends about your fancy little tricks."

Allison and June, with space helmets in hand, put on the earphones. Sasho pranced across the floor, laughing. For the moment the radio was all their own.

"This is Allison. I'm aboard Sasho's S-37. June's with me. We're in a hole."

"I'll say you are," came Bob Wakefield's low mutter. "Don't you know the battering rams are smashing every Sasho boat to hell! Smitt's taking everything that comes down."

"Let him come!" Allison whispered fiercely, and June nodded her quick approval. "We're sunk already. Anything to get Sasho!"

"Smitt'll get you, all right," Wakefield groaned. "I couldn't stop him—his radio's dead. He'll smack you square through the nose! Can't you make a jump for it?"

That was all. A pained bellow from Sasho brought Allison and June up sharply. They saw no reason for his pain at first. He stood glaring at a porthole, his paunchy hulk frozen. Red light reflected across his silver headdress.

Then they saw. Swiftly it shot by—Smitt's sleek red metal battering ram, tapering off into a tail of flame. It was gone.

"The gun!" Sasho thundered. He and his two aides stormed up the stairway. The anti-aircraft gun groaned and the ship shuddered.

Allison and June fastened their helmets on securely. The aide at the controls shot a glance at them—his own business was too pressing to do more. Together the two fugitives dashed for the disposal chute.

It was locked.

Allison grabbed an ax from under a bench and shattered a porthole. The glass blew out. He boosted June to the opening.

The sound conductors in his helmet brought them thunder of footsteps down the stairs. He whirled to see Sasho's

arm come up with a gun.

Allison flung the ax. A shot and the crash of metal rang together. Sasho came on, his big frame lunged. Allison doubled his fist and swung as hard as he could. He struck a head that was as solid as stone.

Two things Allison saw in that fleeting moment. One was the glint of red reflected in Sasho's blazing eyes. The battering ram was coming back!

The other was Sasho's suffocating gasp for breath. The air was leaving rapidly through the smashed portholes. The aides made a dash for space helmets—

JUNE jumped. Allison followed. Out of the corner of his eye, he saw that the others were coming too.

For the first time it flicked through his consciousness that he and June were the only ones with parachutes!

A few yards apart they fell, Lester Allison and June O'Neil. Looking back they caught a glimpse of one of the world's rarest pictures—a picture they would remember as long as they lived.

A battering ram, streaking brilliant red through space, smashed squarely through the nose of the majestic S-37 as if it were nothing—a climaxing blow that spelled the end of an Empire!

(Continued from page 6)

DELVING into the past, we run across a lot of amazing facts. And there is probably nothing more amazing in all European history than middle-ages man's ideas on medicine and allied subjects. Marcellus de Bordeaux, court physician to Emperor Theodosius III of Byzantium (716-717), conducted a school of medicine in Constantinople and there taught his pupils that a person troubled with pimples should "watch for a falling star, and then, instantly, while the star is still falling, wipe the pimples with a cloth or anything that comes to hand. As as the star falls from the sky, the pimples will fall from the body. But do not wipe the blemishes with the bare hand, for then will they be transferred to the hand."

Which is a new (or old) use for shooting stars! Huck Finn used stump water in the dark of the moon, and the tail of a cat dead nine days. We wonder which works better?

ACCORDING to the English monk, William of Malmsbury, the Wright brothers weren't the first to fly. It seems a monastery brother, named "Elmer" made himself a flying machine and flew for more than the distance of a furlong, but agitated by the violence of the wind, as well as by the consciousness of his rash attempt, he fell and broke his legs and was lamed for life.

He used to relate in after years as the cause of his failure, says William of Malmsbury, his forgetting to provide himself with a tail.

This sounds logical. Unfortunately, "Elmer" left no design of his flying machine.

To corroborate this story, Abbot Carmil, writing about 1311, tells of one John of Beatsley, "that he would soar the skies as did that rash monk, Elmer of Malmsbury, some two hundred years ago." Maybe the story's true?

NEW YORK CITY has given a modern romance to its automats, but they'll have to disclaim the credit for their invention. It seems that the Greeks had 'em as early as 100 B. C.

According to the history passed down to us, the principal items of sale in the Greek "automat" (they must have had a word for it, but they didn't pass it on to us) were honey cakes and sweetmeats of different sorts, bits of spiced cheese, clusters of grapes, etc.

To secure something from the automat, one had to force a certain denominated coin into a slot, and this action released a tiny catch which caused a trap on a hinge to open and a single cake or what-would-you would fall into a basket below. The machines were the invention of an unknown youth, the slave of a prominent banker, Clisthenes of Corinth. Clisthenes had several hundred of the machines built and set up in strategic locations in a half-dozen cities.

WHAT, and who, was Roger Bacon? He lived in the 13th century, and is supposed to have discovered the Elixir of Life. To the possessor of this Elixir, eternal rejuvenation was possible. However, it seems Roger Bacon isn't with us today because his Elixir was stolen from him by an envious monk, who still lives, imprisoned somewhere in a cave by the wronged inventor! Poor fellow!

More practical, however, is the horseless cart Bacon invented. It operated by means of a tightly wound spring which would turn the wheels as it unwound.

ON page 128 you will find the winners in our Error Contest, of last December issue. We had valiantly struggled through the entries to select the winners, and found one letter which was 100% perfect. To this gentleman we were proud to award the first prize. However, imagine our embarrassment to discover that we had awarded it to Mr. Milton Kaletsky, author of the story! We had gotten his letter to us, listing the errors, mixed in with the contestants' letters, and no wonder he was perfect! Naturally, we had to disqualify him. However, Milton, you nearly had us there! The joke might have been on us, but it looks like it's on you!

YOUR editor is much disappointed in the war. During the past six months, nothing really new has developed, and that after his prediction that new weapons would show themselves! But it would seem that recently a new weapon uncontrolled by man was a factor in the future of the war. We refer to the Rumanian earthquake.

This earthquake is an unusual one, because it centers at a depth of 100 miles. Something odd has occurred there, and since at a depth so great, Earth's crust is molten, we wonder exactly what it was that caused the trouble?

It reminds us of Don Wilcox's yarn in which molten rock form the depths was used to put a dictator in his place. What if science had discovered how to cause an explosion at a desired point in the molten magna? Would it not cause just such a peculiar "quake" as this?

"Hi, Mom! Hiya, Pop!"

OUTSIDE of the fact that your editor had a grandstand seat, from his 22nd story window, during the November storm that caused so much damage, the day is notable to him because it meant frustration to the scientists who wanted to check once more on Professor Einstein and his theory by observation of the transit of Mercury across the Sun's face. It seems that Einstein said a moving body increases in mass with its motion, and although we don't understand just how this is technically checked by Mercury, we are sorry Mother Nature is so intent on keeping us ignorant. All we can report this time is the terse comment: "Observation impossible." Better luck next time, we hope.

AUTHORS and readers who visit us in our office are fascinated by the pictures of 116 dogs which adorn the walls. They are mystified by the phenomenon, and invariably look at us with wonderment and ask: "Why?"

To which we are forced to reply: "We don't know." It is one of the mysteries of AMAZING STORIES' office which is never explained. Perhaps it is simply a stunt to "amaze" our readers. One of these days we are going to begin to wonder about it ourselves!

WE recently received a letter from David V. Reed, who will appear shortly in AMAZING STORIES with a clever short. Dave has been burning the midnight oil, (literally, because he does all his work at night when the rest of the world sleeps) and has been doing very well. Dave is undoubtedly one of the bright lights of the future, and we'll predict he appears in the "slicks" in short order. But meanwhile, he says he will give his first love, AMAZING STORIES something for the readers to sink their teeth into. So his promise delights us, and we pass it on to you.

OUR time machine department passes on an item that's really in the future! But now's the time to start telling you readers about it, because you've been asking for two years for the return of Neil R. Jones. So, Mr. Jones will have a story in the September issue, which we think is the finest bit of work he has ever done. It is the result of Mr Jones deliberately trying to crack our much maligned "policy," and as he says: "I've done my best." We think his words will prove prophetic.

WHAT have steam shovels to do with science fiction? Well, there's an interesting item behind that question. Ralph Milne Farley, who has a yarn in collaboration with Al. P. Nelson coming up in AMAZING STORIES, does a great deal of his excellent writing on trains, enroute to various distant destinations in the capacity of attorney for the Bucyrus Erie Company, makers of the world's largest shovels. Whenever one of these shovels takes too big a bite, and digs up half a county, Mr. Farley placates the injured parties legally.

Rap.

Scientific

DR. C.E.K. MEES, ROCHESTER SCIENTIST, HAS DISCOVERED THAT **LIGHT RAYS** HAVE AN AMAZING CONNECTION WITH **LIFE** AND ITS FUNCTIONS. HE HAS DISCOVERED HOW TO PHOTOGRAPH "**DEAD**" STARS —

HOW LONG HAS THE **EARTH** TO LIVE? WILL IT BE CENTURIES, AGES, MILLENIUMS? IS LIFE, AS WE KNOW IT, **DOOMED** ON THIS PLANET?

THE AMAZING— DISCOVERY THAT THERE ARE MANY NEARBY "**DEAD**" **STARS** MAY PROVE THE— ANSWER TO THE RIDDLE OF THE **NOVA**. WILL ONE OF THESE UNSEEN, NEARBY STARS FLARE FORTH AND BATHE **EARTH** IN DEADLY RAYS?

Mysteries

HOW LONG HAS THE EARTH TO LIVE?

By MORRISON COLLADAY

WHAT are the chances of a star suddenly smashing into the sun and destroying it and us and the rest of the solar system?

Astronomers in the past have said it was a possible happening but not a likely one. Such collisions occur several times each year in various parts of the visible universe when new stars, novae, blaze up in the heavens.

However, the courses and distances of the visible stars nearest to us are known and they contain no immediate threat to the solar system. A wandering comet or a large asteroid might crash into one of the planets and raise its temperature sufficiently to destroy life, but until recently astronomers have visualized that as the only foreseeable danger threatening the earth, for example.

Now they are not so sure, because of the discovery by a chemist in a Rochester, New York, laboratory.

Scientists have known for many years that not all light is visible to human eyes. There is the "visible spectrum" which consists of light as we know it. Beyond one end of this spectrum is light consisting of very short waves which we can't see and which scientists call the ultra-violet. At the other end is light consisting of long waves also invisible to us, which they call the infra-red.

Astronomers have mapped the stars by photographing them through a telescope. They no longer spend their time gazing through the instrument but in studying photographs taken through it. So far as they knew, they had located all the near stars. However, there was one flaw in this method which made their results inconclusive.

The emulsion which coats ordinary photographic plates or films is not sensitive to red light. That is why it is possible to use a red lamp in the dark room when photographs are developed. This means that while it is easy to photograph objects at the violet end of the spectrum, it is very difficult to photograph those at the red end. Chemists have been working for years to produce a film equally sensitive to all colors.

Dr. C. E. K. Mees, in charge of the Eastman Laboratory in Rochester, found that when certain dyes known as the dicyanins were mixed with the ordinary photographic emulsion, its sensitiveness to red light was increased. Astronomers began using plates coated with this new emulsion. When the first ones were developed after exposure through a telescope, an astonishing fact was discovered. They were not only sensitive to the visible red rays of the spectrum but also to the infra-red or so-called black light invisible to the human eye, and showed objects in the sky which no one knew existed.

A recent report issued by the Carnegie Institution of Washington gives two photographs of a certain region in the sky. The one taken on an ordinary plate by visible light shows a dim central group of stars with other faint stars in the vicinity, possibly a thousand in all. The photograph of the same region taken on a plate sensitive to infra-red rays shows a brilliant glowing mass of at least 10,000 stars.

Dr. C. W. Hetzler of the Yerkes Observatory photographed a region of the sky where previous pictures on ordinary plates after long exposure showed only a few stars so faint as to be barely visible. When he developed his black light plate he saw these faint stars as glowing suns ten thousand times as bright as in the earlier photographs. There were besides, thousands of stars that did not appear at all in the other pictures.

Astronomers hesitate to interpret these results in positive terms. They say the stars so brilliant in the infra-red photographs are either of enormous size or very near to us. The stars revealed for the first time in the photographs are visible because they are not entirely dead worlds but still faintly red. There probably exist many completely dead stars emitting no light and consequently impossible to photograph on even an infra-red plate, and some of these may be very close neighbors of the solar system.

A dark star so enormous that it would fill the entire solar system out to the orbit of Uranus has been discovered by Dr. Otto Struve of the Yerkes Observatory. It is one part of a binary or double star the other part of which is bright and much smaller. These two stars revolve round a common center in a period of about twenty-seven years. The dark star visible only by infra-red light has a radius of 1,200,000,000 miles. Its smaller companion has a radius of 70,680,000 miles.

Of course it does not follow from the discovery of near dark stars that the earth is in any immediate danger of destruction. The chances are still inconceivably great that such a catastrophe will not happen in the foreseeable future.

But they are not as great as we thought they were.

—Morrison Colladay.

THE LAST

BOTH men were exhausted. It was evident from the sharply etched lines of fatigue that marked their features, the gray-black circles that ringed their eyes. But beneath the exhaustion of them both, there burned a feverish excitement.

The vast white laboratory in which they worked was littered with the evidences of their intensified efforts. Tubes bubbled with liquid compounds and tables were covered with a maze of papers and graphs. Compasses and pencils lay strewn about.

Forbes—he was by far the older of the two—leaned over one of these tables, a tall, gaunt, white-haired skeleton of a man. In his stained chemical smock he looked like some weird necromancer out of some long-forgotten legend. The pencil in his thin, strong hand moved rapidly over the papers before him. His every motion, every gesture, was cool, swift, efficient. He seemed to radiate assurance.

Before the line of bubbling tubes, checking the variance of the multicolored liquids, Barton—the younger of the pair—paced excitedly back and forth. He couldn't have been more than thirty, this young assistant in research, and like Forbes, he wore a once-white chemically stained smock. His hair was lank and dark, and hung over his forehead. His features, but for the stamp of fatigue on them, were strong, even, almost handsome. But in his movements there was none of the calm assurance that marked his older superior. Barton's actions were jerky, nervous, seeming to indicate the terrific mental tension that tingled through the vast laboratory.

Impatiently, Barton moved up and down the line of tubes, brushing his lank, black hair off his strong forehead now and then, and making swift jottings on the notes he held in his hands. Then he turned from the tubes and moved over to the table where Forbes stood. Silently, the young man placed his tabulations on the table, and the gaunt, white-haired old man drew them closer with his thin hand. After studying them swiftly for a moment, Forbes turned to his assistant.

"Good enough, Barton," declared the old man calmly. "It seems to check. We can take time enough for a cigarette if you like." The tall, gaunt scientist fished into the pocket of his stained smock as he spoke, and brought forth a crumpled packet of cigarettes, offering one to the younger man with a friendly gesture.

BARTON took a cigarette with hands that trembled slightly, and the old man, noticing this, smiled. "There now, boy," he said softly, "calm down a bit. We've still more work to do before this thing is completed. Try to relax as best you can."

The young assistant ran a hand across his face shaking his head slightly. "I'm sorry," he said. "But you can understand how I feel about this, sir." He was trying to smile now, and was succeeding to a small degree.

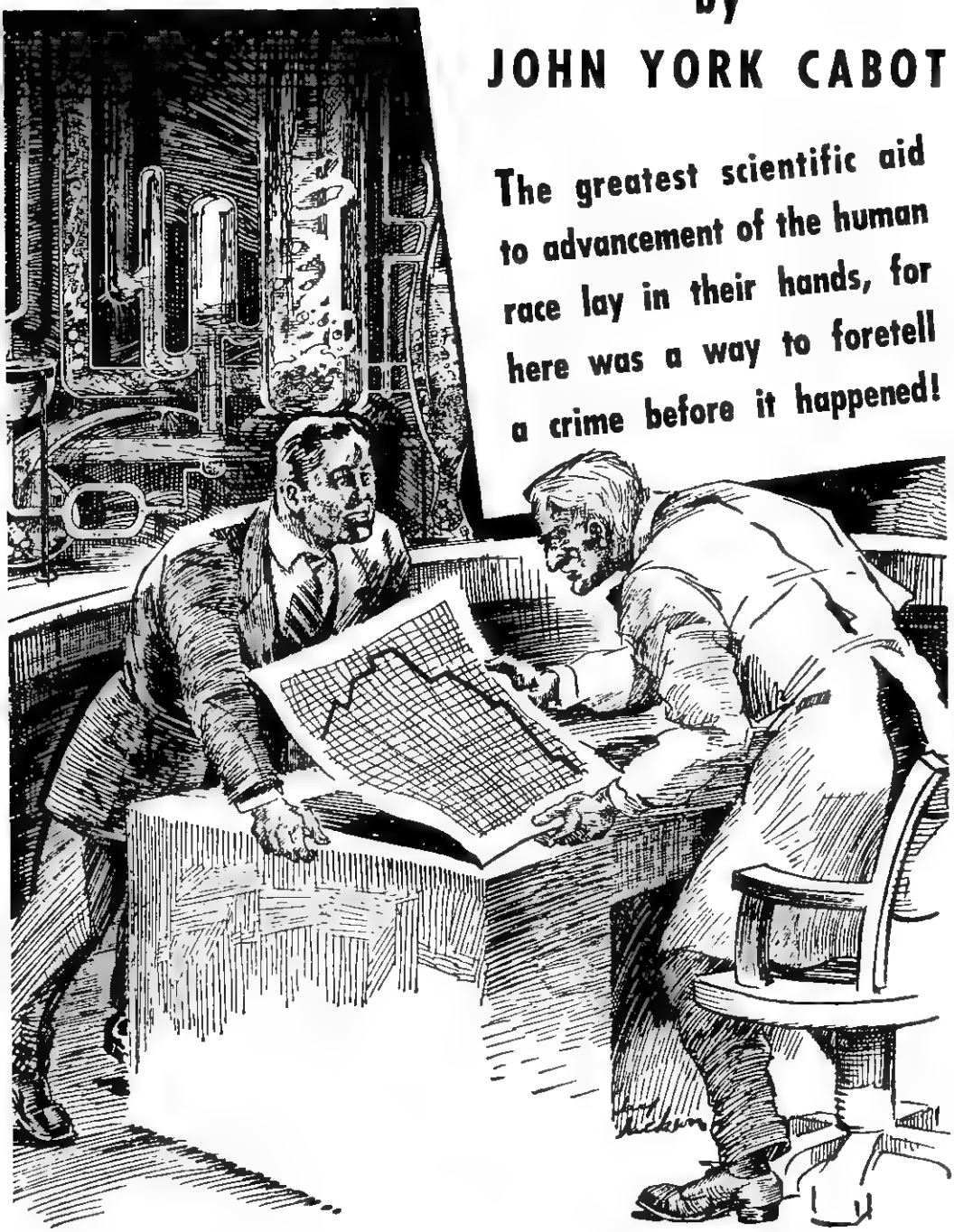
Forbes nodded, exhaling blue smoke between the words he spoke. "I know," he admitted. "I was the same when I was your age, Barton. Even the smallest experiments used to work me into a lather of excitement. I don't know if I would have reacted as well as you're

ANALYSIS

by

JOHN YORK CABOT

The greatest scientific aid to advancement of the human race lay in their hands, for here was a way to foretell a crime before it happened!



"I hope you got *this* sample tube from the morgue!" said Forbes

doing now, had I ever been engaged in anything as important as this."

Barton smiled self-consciously at the compliment.

"For this *is* an experiment of great importance," Forbes went on. "I'll be the first to admit as much. I was very careful in choosing you as my assistant, Barton. Very careful, as you'll remember. I was in need of someone with youth, someone with energy. You had both, in addition to knowledge far beyond your years and experience." He reached forth to place a thin hand on his young assistant's shoulder. "I'm well pleased with you, boy. Well pleased. I'd never have shared credit for my findings with anyone other than you."

Barton lowered his eyes in embarrassment. "Thanks, sir," he mumbled.

"It will be quite a feather in your scientific bonnet," the old man went on. "Quite a feather. I doubt if you'll ever accomplish anything of greater magnitude."

"The Forbes-Barton Equation," the young assistant said, face shining. "Damn, sir. I don't see how there could ever be a discovery of greater magnitude!"

Forbes smiled tolerantly. "We're but laying the foundation, lad, the groundwork, for scientific strides that will far outdistance our own. What we are doing will totally eliminate sociological ills in the world. Totally eliminate them."

Barton shook his head. "A world without hate, without murder, without crime, without war. It's almost impossible to grasp the scope of it all."

"You've forgotten, Barton, that what we accomplish here tonight is just the beginning," the old man cut in. "To prove our equation to our own satisfaction is one thing. To prove it to the world is another. Our announcement is going to be greeted with skepticism, intolerance, lack of understanding. The sneers of the world will not be easy to take."

The young assistant's eyes glowed feverishly. "Damn them, sir! We'll put it across whether they like it or not. Surely the men of science, the men of medicine, will see the value of our equation."

Forbes nodded. "They will haggle over it, probe it for inaccuracies, quibble over its theory, while the world looks on at it all as sort of a novelty, yes." He smiled. "But it will take them time to see what we're driving toward."

"We're driving toward the elimination of crime. The elimination of crime by scientific equations. Certainly they—"

FORBES shook his white head, his thin features fixed in calm amusement. "They'll listen to us when we prove that the physical equations, the chemical components, of each man are as separate as fingerprints. They'll listen to us when we say that each man's chemical components can be classified —individually—to label that man specifically by an equation peculiar to himself, an equation possessed by no other man. They'll listen when we tell them that we can identify any man by the resultant chemical equation of the matter that goes to make his body—yes."

"But they'll listen, too, when we tell them that—" Barton began.

"Tell them that we can classify them as criminal or non-criminal types, just by their chemical equation?" Forbes cut in. He shook his head. "No. I don't think they will listen. You can't tell the world that some of them, whether they know it or not, are positive criminal types. You can't take the chemical equation of a banker, for example, and tell him that his equation makes it ab-

solutely unavoidable that he will, at some time or another, commit a ghastly crime."

"But they will *have* to realize that!" Barton broke in, face flushed feverishly. "They will have to realize that, before we can sociologically adjust the world!"

Forbes shook his head. "It will take time, lad, much time. Perhaps neither of us will live to see the day when our equation will be accepted. We can merely tell the world what we have found, give our findings to science, as a record, something to work on. Something to believe when the time comes."

"But why won't they be able to see, just as we have seen, that every man, from the time of infancy, has a set chemical equation that will determine his status, sociologically, for the rest of his life?" Barton's voice was edgy. Obviously the strain of the experiment was causing his exasperation.

"That," Forbes replied kindly, "is another thing that will take time. Can you picture trying to tell a mother that her infant has definite criminal equations, that her infant is destined to murder at some time in the future? And that, for the sake of the world, her infant must immediately be eliminated from existence?" He shook his head. "No. You can't. But that is the inevitable result toward which our findings point, the day when the world will be sociologically harnessed by just such methods." He put his hand on Barton's shoulder again, shaking him slightly. "No, boy. Our task is but to prove this equation. In that alone, we should be satisfied."

"I had almost forgotten that," Barton nodded. "I'm sorry. I guess the strain must have had something to do with this outburst." He shook his head, as if to clear it. Then, dragging deep from his cigarette, he dropped it to the laboratory floor, crushing it out.

"Certainly," Forbes agreed, digging his thin hand into the young man's shoulder. "We can be satisfied in merely our part, eh, Barton?"

Barton nodded, then smiled. "Right."

The old scientist crushed out his cigarette on the laboratory desk, took a deep breath, stretched.

"Well," he said. "We might as well get back to work, eh, lad? Our final checkings should see this thing through. Have you got the lists, the equation findings?"

BARTON stepped over to a tube, took it off a bunsen burner, and brought it back to the table. "This is the first," he announced. "You have the component readings on those slips I gave to you."

Forbes set the tube on a rack before him, reaching for a large cardboard chart as he did so. Then, while his young assistant looked on breathlessly, the old man began a series of rapid calculations. There was a tiny vial of blue liquid at his side, and as he worked, he added drops of this to the tube which he'd placed on the rack. At length he looked up at the tube.

"Green-amber," he muttered. "Right?"

"Correct," Barton answered. "Exact shading."

The old man ran his thumb down the chart, stopped, cleared his throat. "Sociologically perfect, usual human inaccuracies, but quite on the non-criminal scale. A slight tendency toward deceit." He looked up at Barton. "Where did you get this component?"

The young man smiled. "I knew the District Prosecutor's physician. He made the chemical analysis for me."

"Then this belonged to the District Prosecutor?" asked the old man, grinning. "Good work, Barton. We seem to have tagged him correctly. Give me

another."

Barton moved over to the line of tubes, taking another one from its bunsen burner. Forbes placed it on the rack beside the first, and while his assistant watched, he repeated his previous operations. Then he was looking at the chart again. After a moment he looked up.

"Hmmmmm," Forbes mused. "Criminal type, positively. Possesses an almost bestial lust for blood, touched by insanity." He frowned. "Where did you get this?"

Barton grinned. "Hit it on the head again, sir. I made the component test in the morgue. That was the tube of a certain Geno Sparelli, a local gangster who was shot down in a battle with the police just yesterday. I also knew a young interne at the morgue. He let me make the component from the body."

The old man smiled. "This seems to be quite in order, then. Get me the third."

Again Barton brought back a tube, and again the old man went through the same processes. At last he looked up. "This is easy. Obviously, this component belongs to the non-criminal equation. Mild to the point of temerity, almost introverted in desire to avoid violence of any type. Would never have even the slightest criminal leanings. To whom does this equation belong?"

"A maiden school teacher. My aunt, to be exact," Barton chuckled.

Forbes smiled. "These are all too easy. Bring me another."

IN a moment Barton had returned with the fourth tube. He gave it to Forbes, grinning expectantly while the old man placed it on the rack and began his computations. Forbes seemed to be taking a little longer over this. He looked up once, remarking, "I hope you got this from the morgue, Barton."

Then at last the old man pushed aside the chart. "This," he said, "is different than the others. Criminal type, yes, but of a subtle nature. The equation shows greed, a touch of insanity, which makes violence an inevitable result. Violence and probably murder."

Barton's grin had slid from his face, and a growing horror was visible in his eyes.

"What's wrong, lad?" Forbes said quickly. "To whom does this equation belong?"

Barton's only answer was a shudder.

"Come, lad, speak up!"

"Try it again, sir!" Barton said at last, huskily. "For God's sake try it again!" He seemed to choke. "You must have made an error!"

Frowning, Forbes bent over the chart again, and laboriously, slowly, began to recheck his findings. At the far end of the vast laboratory a clock seemed to tick with the loudness of hammer falls. Beads of sweat stood out on the young assistant's brow, and the horror was still in his eyes.

After minutes that seemed as hours, Forbes looked up. He gazed intently at his young assistant, then cleared his throat. "I made no mistake," he said. "The findings are exactly as I first stated they were!" Then, in a softer tone, "Come lad, tell me whose equation this is. Someone you know?"

"Can't it be wrong, sir?" Barton's voice was hoarse.

Forbes shook his head. "No. There is no margin for error. This component reading, this equation, is that of a killer, a person driven to violence through greed and an unstable mind!" He paused, then more sharply: "To whom does it belong?"

BARTON'S face had gone chalky white. "I don't want to tell you,

sir. It's wrong. It has to be wrong. That person has never been guilty of the slightest criminal tendencies. I—that person, would never think of violence of any sort."

Forbes was looking at his young assistant with dawning apprehension. "The person to whom this equation belongs," the old man said, "might not have committed any crime as yet, lad. But the evidence is here. He will do so, just as definitely as two and two will add to four!" He cleared his throat. "The findings are certain."

"But, sir," Barton began. "Greed and violence, I—"

Suddenly the old man paled. "Good Lord, Barton! You don't mean that you—?" he broke off meaningly.

"It must be wrong!" Barton burst forth.

"Greed, ending in violence!" The old man's voice was aghast, "it can't be, but," he paused, "the only greed you would have would center around the most important thing in your life—this experiment!"

Barton was trying to find words to protest, but the old man hurried on. "The only greed you could have would be for credit on this discovery, and the only violence which could attain it, satisfy it, would end in my death!" He stood up now, trembling, composure gone.

"But, sir," Barton's voice was near hysteria, "I can't—"

"The tube you gave me, the component, was your own!" the old man was saying, as if to himself. He was looking aghast at his young assistant, not hearing the words that were clogging in Barton's throat.

"I—I . . ." Barton gurgled, his face red in torment.

"You would kill me," Forbes breathed in horror. "You would kill me to gain the honor of our findings!"

"Professor Forbes—" Barton began.

"But you won't!" the old scientist said suddenly. And his hand, which had been exploring in the drawer behind his back, came forth with an automatic pistol. "You won't," he said hoarsely, while the gun spat and kicked in his hand.

Barton was sliding slowly to the floor, his stained smock splashed red above the heart, his glazing eyes fixed on Forbes as he dropped to the laboratory floor.

"I—I tried to tell—you . . . I tried. . . ." He coughed horribly, blood gushing from his mouth. His head sank to his chest, then with an effort, he raised it again.

"I—thought it—couldn't . . . You didn't make a mistake . . . That tube was—"

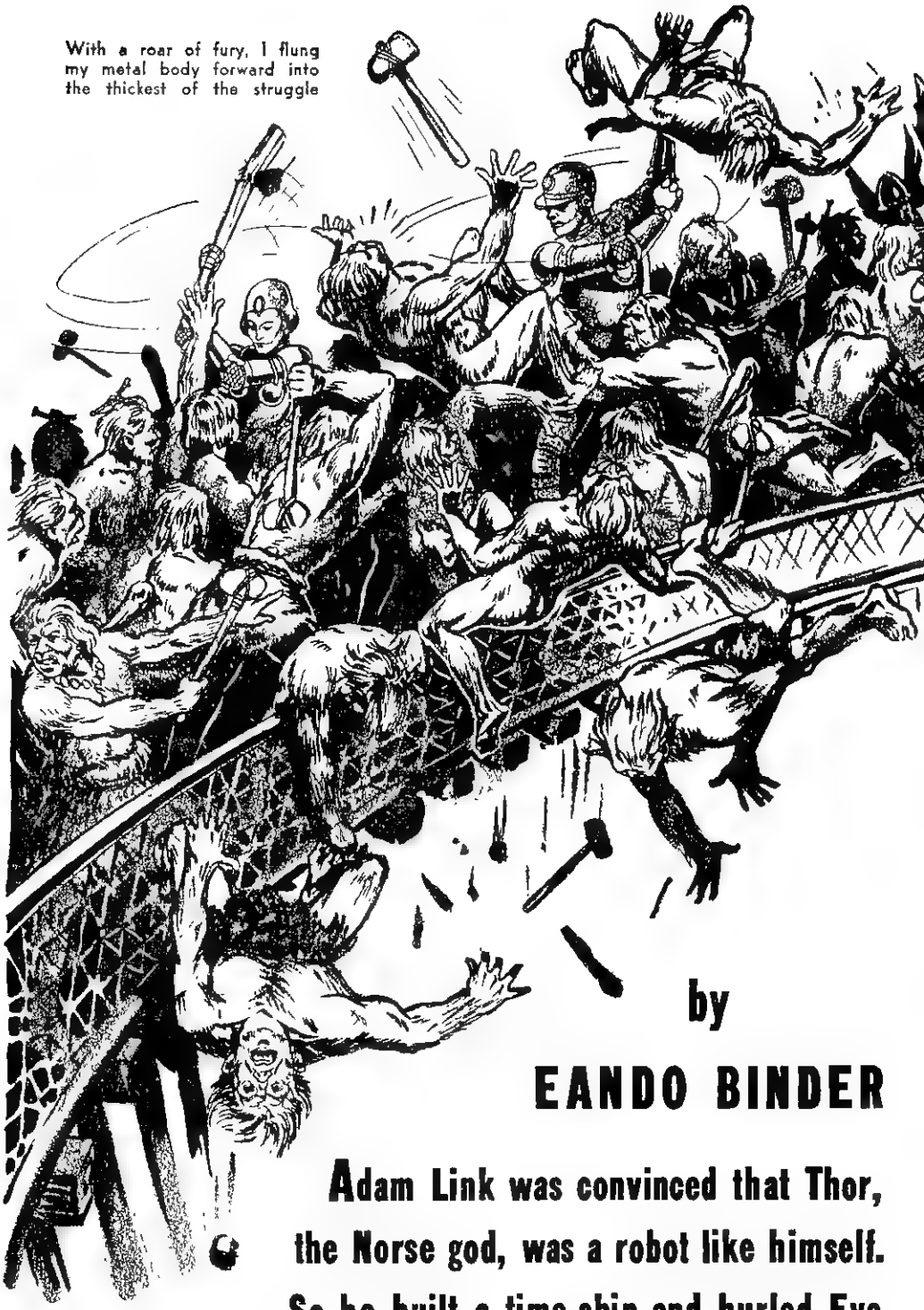
Forbes stared down at the fallen man, his face suddenly going ashy gray.

Barton's dying eyes stared straight up into Forbes'.

"Professor . . . Forbes," he uttered through blood-flecked lips. "That tube . . . was your . . . *own!*"

« AN ANESTHESIA 2300 YEARS OLD »

AS early as the 5th Century B. C. the stems, leaves and capsules of the lavender flowered poppy of Persia were employed in the preparation of an extract called by the magi-physicians "mecorum." This sophoric drug, administered at normal strength, acted as a mild sleeping potion. Diluted with water or water-and-wine it served as a soothing beverage much like our coffee or tea. In its divided strength it was given to children as late as this century much after the European and American custom of feeding infants soothing syrups containing opium. The magii had a way of doubling the ordinary strength of mecorum and in this form it is claimed to have been used as an anesthetic for minor operations. In Sanskrit manuscripts written thousands of years ago, but unquestionably based on legend rather than fact, it is related that the Hindhu king Bhoja was operated on for a growth while under a general anesthesia produced from a drug called "sammohani". Another drug, "sanjivini," is supposed to have revived the king after the operation.—*S. M. Ritter.*



With a roar of fury, I flung my metal body forward into the thickest of the struggle

by

EANDO BINDER

Adam Link was convinced that Thor, the Norse god, was a robot like himself. So he built a time-ship and hurled Eve and himself into the past to find him.

Adam Link IN THE PAST

I STARTED out of a deep revery. Eve had just spoken sharply.

"You must snap out of it, Adam," she said. "Another month of this brooding and you'll go insane!"

"A robot can't go insane—" I began.

But I knew I was wrong. Any mind —human or metal — crumbles before what seems an insurmountable problem.

My insurmountable problem was that of introducing intelligent robots into human society. Citizenship was out of the question, or robots would one day outvote humans. Secondly, patent rights on my iridium-sponge brain would be dangerous to file, especially during a period of great human conflicts.

I had come back from the California episode heartily sick of the whole business. I had created thirty new robots, to prove their usefulness in industry. Instead, they had proved their usefulness in warfare. I was completely disillusioned, gloomy, morbid.

I had tried to get my mind off the entire matter. Eve had read to me, like a dutiful wife to a sick husband. We had retired to our laboratory-home hidden in the Ozarks. But only half my mind listened to her voice. The other half wrestled with the crushing thought that perhaps robots could never have a place on Earth.

"Adam Link," I said for the hundredth time, "the first of metal men, might also be the last!"

Eve glanced at me anxiously, and resumed her reading.

"Thor, the thunder-god, had an iron chariot. He never crossed the Bifrost Bridge because the other gods feared his heavy tread and mighty frame would make it crash. When Thor walked, lightnings sparkled from him. He had a mighty hammer which no man on Earth could cast as far as he. He was the strongest and mightiest of the gods, and their protector from the Frost Giants—"

I interrupted harshly.

"Stop reading that utter drivel! Can't you find anything else?"

"But Adam," Eve said patiently, "I've just about read you all the human literature that exists. Before this, you read every technical work known. There's nothing left but mythology!"

Eve's mechanical voice, when reading, is a blur of rapid syllables, indistinguishable to your human ears. She reads, and I listen, ten times faster than a human. We had exhausted the libraries of Earth, in our brief three years of life.

"The first of intelligent robots," I said despairingly again. "And perhaps the la—"

I stopped. My ceaseless pacing up and down the room stopped. My brain spun a little, as it absorbed what I had just heard.

"Iron chariot—heavy tread—mighty frame — lightnings and thunders — mighty hammer which he threw further than men!"

I was suddenly clutching the book out of Eve's hands.

"Eve, what does that sound like?" I demanded, rapidly thumbing the pages and reading them at a glance. "For instance, this. 'Thor always wore iron gloves to throw Mojilnar, his great hammer. He slew the Frost Giants with ease, for no one could stand against him. When he walked, the ground trembled and the men of Midgard cowered in fear at his awesome appearance.' What does that sound like, Eve?"

"A fable such as humans devised in less enlightened times," Eve returned.

I read another line.

"'Thor's voice pealed like *thunder!*'"

My electrical larynx issued the last word with all the volume that the word implied.

Eve started violently. She stared at me. "What do you mean, Adam?"

My voice sank to a whisper.

"I mean this, Eve: If there is any kernel of fact in legends at all, *Thor was a robot!*"

After a moment I said decisively: "I'm going to build a time-machine, Eve. We're going into the past."

EVE was not astounded at my second statement, as at my first. Any human would have gasped at the blithe announcement of constructing a time-ship. Eve merely accepted it for what it was—a task within range of our abilities.

I finished the time-machine within six months.

It is simple to say that. But harder to explain how I did it. In six months, in my laboratory, I had solved the "secret" of time. It is no secret. Time is not a road or "dimension" down which you travel in one irretraceable direction. It is a haphazard zig-zagging through the entropy-zones of space. Once you track this winding path, and understand its twists, you are able to forge a new track—ahead or back.

I did not want to go ahead. I wanted to go back. Back to a dim age when "gods" lived in a north land. When deeds were performed that have rung

down in history as greatly exaggerated legends. When a robot walked the Earth, and was called Thor.

"Just think, Eve!" I said excitedly. "Perhaps I'm *not* the first of intelligent robots. And if a robot—or robots—once before existed in human history, why didn't they survive? Did they meet so many obstacles—like myself,—that they lost out? Who built that first robot? I've got to know the answers, Eve. This may be the solution to my own problem."

Eve nodded. She was happy that I had completely emerged from my previous fog of mental inertia.

We stepped into the time-ship.

Briefly, it was a globular vehicle of light alloy, with a dozen windows of quartz for vision. The controls were simply two levers, for orientation in space and time. Three dials read off watts, miles and years. For motive power I had devised a heavy-duty battery which constantly recharged itself through the absorption of cosmic-rays.

Yes, they are all advanced scientific principles. Yet they lie before the noses of you human scientists. I take no credit except that my mind works with the rapidity and clarity of a thinking machine. I went through research that might ordinarily take years or decades.

The interior of the globe was mainly empty. Eve and I needed no food supplies, or water, or tanked air, or clothing, or chairs, or beds. There was only a cupboard stocked with a dozen replacement batteries, and a selection of spare parts for our mechanical bodies.

I grasped the time-lever. As a test, I set the time-dial three years back, to the day I was created. I pulled.

There was just a blinking sensation, as if a light had been turned off and on. But the laboratory vanished. It hadn't existed three years before. The Ozarks around us were the same, however. Only here and there the shrubbery had changed somewhat.

I moved the spatial control.

Its method of moving my ship physically was a by-product of the time-warping engine. By slipping the ship a few minutes or hours back in time —in relation to the daily clock—I moved westward. In effect, the Earth rotated under me. To move in latitude —north or south—I set the time-dial toward summer or winter. Because of Earth's axis-tilt, any new position in its orbit means a progressive movement from one pole to the other.

Perhaps this seems confusing. To me it is as starkly simple as turning the steering wheel of a car to take a curve. By the manipulation of these time factors, anyway, I moved quite certainly both in space and time.

After the off-and-on blink of my movement west and south, the time-ship hung suspended over a country home. A brick building at the rear housed a laboratory. My iridium-sponge brain had been brought to life here, by Dr. Charles Link.

CHAPTER II

A Search Through Time

"IT worked, Adam!" Eve said. "You're wonderful!"

Eve is so much like a human girl at times, proud of her man's doings.

"Bosh," I returned. "You know it was as simple as ABC." But even though my phonic voice was flat, I experienced a real thrill. No human had ever traveled the highroad of time.

"It looks hazy below," Eve commented, looking down through the bottom window. "Why is that?"

It puzzled me. "We'll go closer," I announced.

It took careful manipulation of the

controls to set the ship down just beside the brick laboratory. A misstep and I might crash through its walls, or into the ground. But after the usual blink, we found ourselves hovering a foot off the ground, and directly in line with the open door of the laboratory.

I looked within. My heart skipped a beat, to use the idiom.

There stood my creator alive again—Dr. Link. The man who had labored for twenty years to achieve the iridium-sponge brain. And who had brought to life a being he named Adam Link and called his son. I looked over his white hair, stooped shoulders, thin kind face—and knew that I loved him.

I opened the time-ship's door.

"Dr. Link!" I called. "It's I—Adam Link!"

He didn't turn. Didn't seem to hear. My voice was curiously muffled. Eagerly, I stepped from the door—or tried to. Some invisible force seemed to hold me back. Impatiently I exerted my full machine-powers, till gears whined. But I couldn't move an inch beyond the hatchway.

"Look, Adam!"

I looked, at Eve's cry. Dr. Link had been working over an inert metal form stretched across his workbench. My metal form! This was the day he had sent the life-giving current of electricity through my metal brain and brought it to life.

I watched, fascinated.

My "birth" was about to be reenacted, before my own eyes. Bizarre experience! I saw Dr. Link's fingers depress a key, as he watched my unmoving form on the bench. Nothing happened. No sign of life. Again and again he closed the key, shooting powerful currents through the iridium-sponge that should now awake to sentient life.

But it didn't.

Dr. Link turned away finally. Bitterness rested in his face. The bitterness of a man who had tried this same thing countless times and had always failed. Suddenly his kindly old face turned savage. He picked up a wrench, swinging it.

I gasped in horror. He was about to smash it down on the inert robot's iridium-sponge brain. The brain lay exposed, with no skull-plates protecting it. One blow and the sensitive organ would be destroyed forever.

"Dr. Link—don't!" I yelled. Even then, my thoughts wondered how this could be—myself trying to save myself!

As before, Dr. Link could not hear. And as before, some strange force held me back when I tried to leap from the time-ship. I could only watch, my mind reeling. If that wrench descended, would I blink out? Cease to exist? Had I somehow thrown the normal course of events awry terribly, by coming here?

The paradoxes of time-travel! I had ignored them till now. What blunder had I committed?

Eve and I watched, clutching hands.

THE wrench descended. The delicate iridium-sponge brain of Adam Link spattered under the blow like broken glass. Dr. Link flung the wrench to the floor and slumped into a chair, weeping. Twenty years of labor had culminated in utter failure. The intelligent robot had not come to life. The living brain of metal was an impossible achievement, after all!

Dr. Link sat there, shoulders heaving.

"Adam!" Eve whispered. "What does it all mean? This is your creation scene. But it's *different!* It ended not with your coming to life, but with your destruction!"

"And yet I'm alive!" I murmured. "I didn't blink out when the wrench smashed that metal brain. According to this scene, I was never brought to life. Yet here I am!"

Profound, stunning mystery of time!

My thoughts clicked swiftly. I had the answer in a moment.

"This is not my creation scene, Eve," I said. "Time is an entropy-zone. Events move haphazardly through it. They rebound from one another. Some one way, some another. What we've witnessed is a different 'rebound' of the creation-event."

Eve stared.

I tried to explain another way.

"This is not our 'world' at all, Eve. That is why we couldn't enter it, from our ship—because we don't have any real existence in it. There are *different* Dr. Links, and Adam Links. Perhaps, in all the greater universe, an infinity of them. And all have experienced totally different results."

Eve's mind is quick. She nodded.

"I see. It's the basic theory of co-existing worlds, side by side, separated by different courses through time. Or simply different rebounds in the entropy-zone. But Adam, how did we happen to strike the wrong course?"

I thought that out in three long seconds.

"Because we took a haphazard route back in time. The only way to keep in our world is by plotting a definite course. Like a mariner guiding his ship across a great ocean without seeing the land he must arrive at. I'll begin plotting now—"

AN hour later, I threw down my pencil and shook my head wearily.

"Impossible," I said. "There are an infinity of courses and rebounds. We might wander forever among them, and never strike our particular world."

"Too bad," Eve murmured. "We'll have to give up our quest for Thor, then."

I hated to do that. A burning resolve rested in me to penetrate back to that remote past—of our certain time-world—and find another robot like myself named Thor. I had spent six months building the time-ship. I could not give up this easily.

An hour later, after intense thought, I jumped up and set the time-dial. Eve gasped, as she read off the figure.

"One hundred million years ago! Adam, what's the use of going to that remote past? Thor wouldn't be there."

"No, but our world will be," I retorted. "There must have been fewer rebounds that long ago, when the universe was younger. Fewer other-worlds. We have more chance of locating ours there. We'll know when we can step out of our ship physically, that we've hit our world. Then I can retrace our world's course forward in time quite easily. I'm determined to find Thor. If need be, I'll go back to the beginning of time, when all things started."

I was that set to finish my venture through time.

One hundred million years blinked by just as quickly as three years had, when I pulled the lever. Our ship had dropped like a stone down into the entropy-depths of the greater cosmos.

One second the scene of a Dr. Link weeping bitterly over his smashed robot-brain was before our eyes. The next second the towering forest of a steamy, carboniferous world engulfed the view outside our windows. Giant dinosaurs lumbered nearby. Pterodactyls soared like great aircraft overhead. A brighter sun shone down with pitiless intensity. This was the world before man.

But it was hazy, almost ghost-like.

When I tried to step from the ship,

my body refused to move. The time-warp around the craft held me with bonds of steel. These would not loosen unless the time-warp dissolved and coalesced with its own particular entropy-world.

"We'll try the next other-world," I said grimly. "And the next, and next. . . ."

WE DID NOT count the numberless worlds that blinked into being before us. Most were dinosaur-worlds, of varying detail. Some, however, were vastly strange. Barren worlds, where some blight-event had wiped out all life. Dark worlds, where the sun had mysteriously burned dim. A cracking world, reeling back from the impact of a dark body from space.

And so on—infinitum.

Your human minds might have staggered to realize how many different other-worlds were drifting through the unknown. Even our sturdy robot minds were dazed. Yet they meant nothing, these other-worlds. They are as remote and unattainable to any of us—humans and robots alike—as the world of an atom. They register to us only as light-impressions which pervade all the ether. Eve and I could never "land" on them, in any slightest way.

No world could be real to us except the one which had given us being —physical being. All the other Earths were chimeras, fantasies, non-existent wraiths.

How long must we search? Eons perhaps, hopelessly?

CHAPTER III

One Hundred Million B.C.

"ADAM!"

It was a sharp cry from Eve. We had just warped into another dinosaur-type world.

"Adam, it's clear and distinct outside. Maybe this is it!"

It was. When we opened the door and moved out, no force opposed us. This was our own Earth, of 100 million B.C. The Earth which had spawned *our* human race, and *our* Dr. Link—and us.

We stepped clear of the ship and viewed the past world as never seen by human eyes. Giant ferns, steamy air, choked pools of swarming life, endless jungle. We saw a ratlike mammal scurry by. It was perhaps the ancestral mammal-form from which would evolve all the later mammals, and apes, and man.

For this was the Reptile Age.

We saw their mighty forms here and there in the distance. Their deep roars shook the ground. They were the lords of Earth.

An ear-splitting roar sounded abruptly, just back of us. Eve shrieked, turning. A mammoth two-legged Tyrannosaurus Rex—king of them all —thundered down on us. Anything was its prey, in its dim-seeing, vicious little eyes. Its great rows of sharp teeth could crunch through anything.

Anything except metal, luckily.

It had caught up Eve like a doll with its foreclaws, and tossed her into its cavernous jaws. The grind of its teeth against Eve's metal form shivered the air. Amazed, it tried again, bellowing angrily.

Eve struggled, but her arms were pinned between ridges of teeth. If the monster kept crunching away, with stubborn ferocity, he might eventually damage Eve.

I think the roar I gave, from my mechanical larynx, was louder than any from a dinosaur. Eve, my mental mate, was in danger! I was probably as savage at that moment as any of the crea-

tures around.

I leaped up twenty feet, to the creature's jaws, grasping the lower one. The combined weight of Eve and myself dragged its head down. I then braced my shoulders against the upper jaw and heaved upward, to release Eve.

I am a robot. I have machine-strength. But it took every watt of my energy-system to force those mighty jaws apart.

"Jump out, Eve!" I yelled. "And then keep away. This monster won't leave us alone, so I'll have to finish him."

When Eve had scrabbled to safety, I put my hands under the upper jaw and heaved again. I strained every muscle-cable in a furious effort. I forced the jaws wider, wider, wider—and there was a sudden crack as the lower jaw-bone snapped. Thank heaven it had not been some part of me!

The behemoth let out a squeal of pain that very nearly ruptured my tympanums. I leaped back. Its pain-maddened eyes glared at me as though contemplating another attack. It still had great foreclaws with which to rend, and a mighty tail with which to batter. But it drew back from me. Tyrannosaurus Rex, perhaps the most formidable monster in all evolution—fled.

"Are you all right, Eve? Let's get back in the ship—"

I broke off.

A great pterodactyl swooped down from over the trees, claws extended to grasp me. I smote it with my fist, on the side of the head. It let out a squawk of dismay, tried to rise, but fell a dozen yards away, completely stunned.

I laughed. The dinosaurs ruled all Earth—except this little patch on which I stood. I might have held it forever against them. Foolish thoughts. I pulled Eve into the ship, setting the time-dial.

ALREADY, since our arrival in our own time-world of the past, I had figured out the course up through the entropy-levels toward the future. If you wish to see the formula I used . . . but no use to set it down. I'm afraid no human scientist would understand.

Eve spoke before we started.

"We changed the past, Adam, in some small degree! We've come to the past and entered into its course of events. What will it mean to the future?"

I shook my head on its swivel, noticing it grated, and making a mental note to oil it the first chance I had.

"We haven't changed *our* world's past. We've only started off another other-world. Since we're here, we've definitely been in our Earth's past. That's immutable. The other-world caused by us is the one that goes on as if we *hadn't* come. It will be a world that never knew Adam Link!"

I will not go further into such paradoxes. You would have to understand time as I do to perceive the grand scope of it.

I pulled the time-lever, annihilating 100 million years. We blinked into 50,000 B.C.

We looked out over the Paleolithic world. I sent the ship to north Europe, in a blink of rotation-time. Thor and the Norse gods, if based on fact, would have lived in the north country. Cruising forward a hundred feet high, we looked down.

We saw sub-men* roaming the forests and plains.

But no sign of "gods."

"They must have been more civilized beings," I reasoned. "Fables are vague about time, but Thor and the Norse gods must have existed somewhere between 50,000 B.C. and 10,000 B.C.

*Neanderthal and Heidelberg men. Also tribes of Cro-Magnon, from which modern man sprung. —Ed.

We'll go forward to 40,000."

"Again sub-men. But surprisingly, the beginnings of civilization, too. Villages of Cro-Magnon—crude boats, spears, pottery. I jumped to 30,000. Cities had sprung up, in that ten thousand years, humming with activity. Aircraft, steamships, cross-country powerlines were in evidence.

I looked at the dials. Could they be wrong? This looked like 20th-century civilization—way back here in 30,000 B.C.! But one thing proved the veracity of my time-gauge—the presence of sub-men. Short, gnarly Neanderthal, and large, hulking Heidelberg still roamed the wilder regions, alongside this civilization of Cro-Magnon.

Cro-Magnon had also set up centers of civilization in a broad, rich valley south of the Norse-country. The future Mediterranean basin, at present dry land. And thirdly, on a large flowering island in the Atlantic.

Eve was excited.

"All legend come true, Adam! It's the mythology we were reading before we left. Civilization in the Norse country, later to be fabled as the Norse gods. Also in the Mediterranean basin, later to be remembered as the Greek gods. And Atlantis! And probably Mu, over in the Pacific. Civilization 20,000 years before the Egyptian!" She paused. "Yet all this vanished. Why?"

My thoughts leaped ahead. I knew the answer. I silently set the time-dial for 25,000 B.C.

In a wink of time, civilization had vanished. Or most of it. Great glaciers and sheets of ice lay over the temperature zones. The Norse cities were already ground to dust. Gibraltar had been born, or split, and the oceans poured into the Mediterranean basin, wiping out all but a remnant of the civilization there. Atlantis s a n k like a stone, leaving so little trace that to this day it is unremembered except as a name. The Norse and Mediterranean areas were at least commemorated in stories of mythology.

"The Ice Age!" Eve whispered sadly. "It wiped all that away. Civilization won't rise again till modern times, in Egypt. Well, let's go back before the Ice Age, Adam. We'll find Thor preceding this catastrophe."

"I wonder," I mused. "The Norse heroes, and Greek gods, sound more like *remnant* people, rather than prosperous ones at the height of their glory. We'll go ahead."

WE went to 20,000 B.C. We cruised over the north-land. The ice-sheets had receded. The continent of Europe as known today lay fertile and forested. I scouted up and down the fjords of the Norwegian coast, looking for I knew not what exactly.

Something flashed in our eyes finally, like a rainbow.

I hovered over it. It was a bridge stretching from the mainland to a small island. A great and wonderful bridge of red copper, yellow gold, white silver, blue steel, and green-coated brass. It seemed made of gossamer-thin strands, delicate enough to be thrown over by the first breeze. But it was old—old. It had stood there for countless centuries, adamant, sturdy, supremely artistic. And built by master engineers.

Eve let out a cry suddenly.

"Rainbow colors! It's the Rainbow Bridge, Adam! The Bifrost Bridge of the Norse legends!"

I knew that Eve was right. The island, then, was Asgard, the home of the "gods." Or of the few survivors of the great, thriving civilization of the north before the terrible Ice Age. Freakishly, perhaps this island alone had escaped the grinding, obliterating forces of the

ice-masses.

In legend, the Bifrost Bridge connected Asgard with Midgard, the home of common mortals—or the mainland of Norway. Here, in virgin forests, roamed Neanderthal, Heidelberg, and Cro-Magnon. They were still savages, sub-men. The next civilization would not emerge yet for 10,000 years. And it would be far south of here, in Egypt and Sumeria.

What kind of people were these Asgardians, survivors of a civilization at least as great as our 20th-century's? There was only one way to find out. We descended. I hovered the ship, first, just over the island, to look the situation over.

A gigantic marble and metal castle stood below. Its ramparts and towers were as finely molded as the beautiful Rainbow Bridge. The weathering of the stone showed the passage of at least 5,000 years. It had survived the tempests, frigidity, and furious battering of the elements throughout the long, bitter Ice Age.

"How beautiful it is!" Eve murmured. "No wonder that even 20,000 years later, it is still remembered in fables, in the 20th century! How sad it is to think this must vanish. . . ."

We looked at each other a little startled.

In a way, we knew the "future." We knew that long before the 20th century, this would be gone, somehow. And that, according to legend, all these people would be in limbo, too.

The Twilight of the Gods.

"Is it possible," Eve said slowly, wonderingly, "that we can somehow *save* this place, knowing what we do?"

I shook my head. "We can't change the immutable future. Not of *our* world. Let's not think of those things, Eve. There are mightier forces and destinies than you and I can tamper with. Let's just remember one thing—that we're looking for Thor. Or a possible intelligent robot like ourselves who lived and moved among these ancient Asgardians."

CHAPTER IV

Asgard at Last!

I LOWERED the ship into a courtyard boldly. The maneuver must have taken their sentinels by surprise. There were dozens of them, spaced watchfully along the battlements. The whole castle had an air of siege, as though for centuries they had held out against enemies.

Suddenly archers let fly with arrows at us. A spear or two hurtled against the ship. From the highest tower, I saw a more formidable weapon aimed down at us—a cannon-like object with a long ugly barrel. Evidently they would finish us off, now that we had landed within the ring of their defenses.

The arrows and spears meant nothing, but that cannon might. I leaped out, before a shot came from it.

"Stop!" I yelled. "I am not your enemy!"

Then, realizing the futility of using the English language, thousands of years before the language was known, I simply spread my arms in a gesture of peace. They must see I had no weapons.

They stopped firing arrows, but I doubt it was because of my gesture of peace. It was simply out of paralyzed astonishment. I could see them all frozen in attitudes of wonder, looking over the form of a shiny metal robot who talked. My stentorian voice had reverberated like thunder through the courtyard, rattling all the windows.

I waited for them to make the next move.

If they still insisted on using that cannon, I would have to move fast.

"Stay at the controls, Eve," I said to her. "If I jump back in, be ready to whisk us away instantly!"

But no shot came from the cannon. We sensed that somewhere in the main tower, the authorities were discussing the matter. A few minutes later a group of figures emerged from the base of the tower, into the courtyard. They had an escort of armed men, with bows and swords ready.

I looked them over as they slowly, cautiously drew near. Blonde they were, blue-eyed, yellow-haired, patently Nordic of race. Descendants of the pre-Ice-Age Norse civilization, who had all been decidedly blonde. They were tall, magnificently built, long-haired in Viking style. In this one thing, at least, legend had not erred—that the Norse "gods" were all heroes and godly in stature.

But they weren't "gods," in any sense of the word. They were as human and mortal as any of today. I suppose if by some chance I vanished from Earth, and a catastrophe destroyed 20th-century civilization, the following age would remember Adam Link as a "god" too. Time throws a cloak of mystery around things ancient.

No, they were men. Men of men, however—tall, straight, athletic. Except for one. One out of the group of six. He was strangely dark, hulking-shouldered, and walked with a rolling, stooped gait. He had something of the sub-man in him. His features were cunning, impish.

I heard Eve's whisper behind me, from the ship.

"Loki!" she said. "Adam, that's Loki of the legend!"

I DECIDED to surprise them. I pointed to the darker man, as they stood warily before me.

"You are Loki—Loki!" I said, pronouncing meticulously. I wondered if the name had survived at all intact.

It had. They all started. The one named Loki grunted in vast surprise.

"How do you know me?" he queried. "We've never seen you before. How can you know me?"

I understood his speech almost instantly. You wonder how. Remember that I have studied every language recorded, including Greek, Hebrew, Phoenician. And the more esoteric ones of Sanskrit, early Sumerian, and Druidic. All new languages spring from a more ancient root. I was able to recognize in Loki's words the root-forms that were later to branch out into all the various languages of the modern era.

I had some difficulty answering, though. It was not so easy to guess which root-words, of the thousands I

knew, went back to the Asgardian tongue.

"I am Adam Link," I said haltingly. "I am an intelligent man of metal. I am from the future. I have come back in time to visit you."

They listened with puzzled attention. How much they caught I didn't know. But their tenseness eased. They were not so fearful of me now. They were intelligent enough to accept me for what I was—a being of metal intellect—whereas the unenlightened submen of the forests might have shrieked in fear and cast stones at me from a cave all day.

The tallest of them suddenly stepped forward, half smiling in welcome. He had a certain regal air that instantly told me who he must be. And he had only one eye. He opened his mouth to introduce himself, but I spoke first.

"You are Odin!" I said. "Odin, the All-Father, or king of Asgard!"

Their faces were thunderstruck. The smile vanished from Odin's face.

"You know me?" he barked. "Then you must be from some near land. Perhaps you are a spy from the Frost Giants of Jutenheim! Or from the Dwarfs of Elfheim! The Giants and Dwarfs have long sought to conquer us, by any and all means. Speak! Explain why you are here!"

I was under suspicion again, for knowing too much.

"I am looking for Thor," I said. "Which among you is Thor? Is he a man of metal, like myself?"

"Thor? Thor?" They looked blankly at one another. The king went on. "There is none named Thor. These with me are Baldur, Tyr, Bragi, and Frey. And of course, Loki. But there is no Thor."

Baldur—Tyr—Bragi—Frey! How those names stabbed through the mists of fabled time! All the Norse "gods"

had then existed, as men, back here in 20,000 B.C. They were to live for all time, in the hearts of men.

But what about Thor? Why was there no Thor, the "thunder-god"? Surely, with the many tales about this mighty warrior, protector of Asgard, slayer of the Frost Giants, he could not be merely a myth added to in stories about ancient Asgard? Thor was one of the most important of the gods.

"No Thor?" I gasped. "Are you sure?"

There was some mystery here.

EVE'S voice sounded in my ear. She had stepped from the ship, seeing I was in no immediate danger.

"Thor might have been among them centuries or even thousands of years ago, Adam. Don't forget this remnant group has been here five thousand years, through many generations. That's a long time. They may have forgotten him. Perhaps later we'll find

records of him in their archives. These may not even be the Odin, Loki, Frey, etc., of legend, but merely descendants of them bearing those names. Or perhaps the ancestors of the fabled 'gods'. We have no way of knowing yet if we've landed in quite the right *period* of Asgardian history, to account for the deeds and stories handed down into our era."

I nodded. Eve's logic was sound. We would have to stay a while and investigate. Thor might have to be tracked down in other ways.

The Asgardians had momentarily stepped back, with a chorused gasp, at Eve's appearance. But a second being of metal is easily accepted, after the shock of the first. They recovered quickly.

"This is my mate, Eve," I said.

Clouds of suspicion still rested on their faces.

"You are spies!" Odin said flatly. "You are our enemies, hidden in metal suits, telling a fantastic story of being metal humans. How can a metal man have a metal wife?"

He barked to his guards suddenly. "Seize them! Rip away their metal armor. We will see who sneaks fox-like among us!"

I was amused as a dozen brawny guards leaped forward and began pulling at me. They tried prying with their fingers under smoothly welded joints. One of them let out a yelp of pain and fright as he made a short-circuit with his finger. A long spark of electricity leaped out, dancing over his arm.

They all scrabbled back, looking at me pantingly.

Exasperated and determined, Odin leaped at me as though to tear my metal "suit" away himself. Loki held him back.

"Fool," he grunted. "You must use proper instruments."

Odin gave the order and the guards now came at me with their steel swords. And they unhooked metal axes from their belts. With these as prisers and levers, they might eventually damage me. I had to call a halt to the foolish proceedings.

"Stop!" I said.

I grasped a sword from a man and snapped it in half in my hands. I flung the two pieces into the air. They sailed completely over the tallest tower, and over the Bifrost Bridge, splashing into the sea beyond. No man could have thrown them one-tenth as far.

"I am strong," I warned.

They gasped at the feat, but still leaped forward, weapons upraised. Certainly they made up in courage what they lacked in intelligence.

I looked at Eve helplessly. In a moment they would begin banging at us with their weapons. If I stayed, it

would end in a fight. If I left, I'd have no chance to find a clue to Thor's existence. It was an impasse.

But something intervened.

CHAPTER V

Adam Rescues Iduna

A SHRILL scream sounded from the high tower. Several of the Asgardian women had craned their necks from windows, with our arrival, to see the strange visitors. Some had daringly emerged on a crow's nest balcony, looking down into the courtyard. One of these women had screamed.

All eyes turned upward. We saw a strange sight. A giant pterodactyl had swooped down from the clouds and grasped a girl in its claws. The great flying reptile, with hardly a break in its speed, carried the girl off to its eyrie, to devour the delicate morsel.

"Pterodactyls still exist in 20,000 B.C.!" I marveled. "Probably the last few of their doomed kind," I added thoughtfully. "No fossils of them have been found of this recent time, but then fossils are rare occurrences. This will amaze paleontologists when I tell them back in our century!"

But Eve was not concerned with such scientific speculation. She grasped my hand, pulling me to the time-ship.

"Don't stand here like a dummy!" she cried. "We'll rescue her. The poor thing must be half frightened to death already. Hurry, Adam!"

The Asgardians stood stricken, watching one of their women carried off by the fearsome monster. Obviously, they could do nothing. They could not shoot their cannon, whatever it was, without killing the girl. Spears and arrows could not harm it, though a few of the guards half-heartedly shot. Soon the reptile's great flapping wings would

carry it off to the mountains.

"Iduna!" Odin moaned. "The fair Iduna, my favorite singer, whom we all love!"

I leaped into the time-ship, with Eve. In lightning calculation, I figured the distance and speed of the monster, and set my controls carefully. When I pulled the lever, our ship shot to its position in the usual blink of time—about fifty feet before the flying reptile.

It very nearly dropped its burden, startled at the apparition of the globular ship before it. It swerved away—seaward. I had planned that. Again I jerked my lever. Again the lumbering giant shied away at the annoying globe that got in its way.

It was almost fun. Time and again I popped my ship before it, closer each time, driving the poor creature crazy. It began to tire of the strain of braking

and turning. And it hated and feared the sea, toward which it was being herded.

Finally it happened.

WITH a screech of rage it dropped the girl and flung itself at my ship, to give battle to this audacious little challenger. I timed it just right. The flying behemoth hit my ship with its head, as I materialized closer. Knocked out cold, it fell like a stone into the sea, drowning.

I darted the ship down to the surface, where a little white figure swam. I knew that the girl, Iduna, would be safe. The Asgardians must all be good swimmers, because of their island life. And their women, to judge by the men, would not be dainty, weak bits of femininity.

Opening the hatch, Eve drew the dripping wet girl in. She had already seen us, in the courtyard, so she was not startled. She stood tall, straight, perfectly proportioned, with beauty that I had seldom seen.

And she smiled, as though having already forgotten that a moment before she had been in the clutches of a terrible "dragon."

"Thank you for what you have done," she said in a rich, sweet voice. "I am sure you are kind and good at heart—whoever or whatever you are!"

She said the same to her companions, when we arrived back in the courtyard. The atmosphere had changed. They looked at us now with respectful wonder and friendliness.

"You have rescued Iduna, the Fair," Odin said gratefully. "You are now our eternal friends. And guests. I welcome you to Asgard, Adam and Eve Link!"

His pronunciation of our names was a little odd—something like Autumn and Eef. The next moment his face went to sheer wonder.

"You must be great magicians!" he said, awed. "Your iron chariot moved with speed we could not follow, with our eyes. You have incredible strength. You are *really* made of metal, not flesh! Yet it is not so strange. In the ancient days, before the Great Cold, our people had metal beings like you."

I jerked eagerly.

"They did? Then Thor must have been one of them who survived!"

Odin shook his head.

"But none of those metal-beings talked, or moved independently, as you do. They were mere clever machines, obeying the human voice. We have no recorded of a robot that was a free and intelligent being. 'Thor' is simply our word for metal."

"I will search your records," I said. "Somewhere I will find a clue."

Perhaps in some odd corner of the castle lay a half-rusted metal form. Once I dated its time of activity, I would know how long before forgotten Thor had lived in Asgard. Then I could go there, and meet the Thor-robot in life.

EVE and I stayed among the Asgardians.

With Odin's permission, I searched their archives. There were not many. Time had rotted most of the library. Fire had once gutted the room. A half dozen ancient, crumbly tomes were all that were legible.

The records told of their once remarkable civilization. Of humming industries, trade, and exploration over the seven seas, wide-spread progress and invention. They had had aircraft, swift ships, subways, skyscrapers, just as we had glimpsed it in our travels from 50,000 to 20,000 B.C.

All this had vanished more than 5,000 years before. The glaciers had plowed every city into the ground.

There were no records beyond the Ice Age.

Loki, who seemed to like our company, gave us a verbal continuation.

"Asgard castle was originally built as a royal resort, where the kings of our land spent leisure hours. The ice-masses somehow failed to touch it, though it gouged out all the fjords of this coast. The Bifrost Bridge withstood, too. Our people had fled to the south. Here, with civilization destroyed, savagery reigned. All the peoples of Earth sank to bestial level, fighting over scraps of scarce food.

"Only Asgard castle remained what it was. In it, a thousand of royal and noble blood lived on. Their children lived on, through centuries of bitter cold. They did not degenerate to beasts, but they lost all previous knowledge. There were wonderful machines, once, in Asgard castle."

Loki conducted us to forgotten corners of the huge building. Rust-eaten pipes, crumbling wheels, heaps of glass and broken debris told of one-time machines. Perhaps the castle had once been heated, air-conditioned, and run effortlessly by machinery. There had been elevators, aircraft hangars, machine-shops. All that was gone. Only the bare walls of the castle remained, in which the present Asgardians lived a next-to-nature life.

"Only one thing remains of original Asgard," Loki informed us, taking us to the highest tower, before its mounted cannon. "It is a marvelous weapon. We don't understand it. It shoots out a firebeam. It burns anything within a mile."

A heat-ray! Even the 20th century did not know such an advanced thing. Was it atomic-powered? I stretched my hand to the control button, to see what mechanism was involved.

I was startled at the shout from Loki. His face was almost insanely twisted.

"Don't shoot the gun, Adam Link! Don't waste a shot. Its days are numbered. With it we have managed to hold off the attacks of our enemies. When it is finally burned out, there will be Ragnarok—the day of doom!"

RAGNAROK! The Twilight of the Gods! An air of sadness and resignation lay over the entire castle. They were the last remnant of a past splendor. They awaited the final extinction.

I questioned Loki, intrigued. "Who are your main enemies?"

"The Frost Giants, who live to the north in Jutenheim. They are a race of giant men, averaging seven feet. They have always warred on Asgard, hating the Asgardians for being finer and more intelligent."

Frost Giants, in name and legend. Heidelberg Man,* in actuality.

"It is too bad that Jutenheim and Asgard must always war," Loki added half to himself.

I looked at him, remembering the legend. "You are Odin's half-brother? You both had the same father, but your mother was a woman of the Frost Giants?"

"Yes," he nodded, assuming someone had told me. "At times there is peace with the Giants. And sometimes intermarriage, though the Asgardians generally shun such tainting. I am of both races, and at times I know not where my allegiance—"

He broke off, shrugging. "Naturally I am loyal to Asgard. We have another enemy—the Dwarfs. The short, gnarly men who live in caves and underground caverns, mostly south of us. Their land is Elfheim. They seldom attack, but

*A race of sub-men of towering proportions, inhabiting the bitter Scandinavian Peninsula. They were probably pressing south, year by year, seeking warmer climates.—Ed.

we know they hate us with a bestial, unreasoning hatred."

The Dwarfs of Elfheim—Neanderthal Man. They had probably come up to Scandinavia from northern Europe, driven away by the Cro-Magnon race. Loki could not see the whole, true picture as I could, with my 20th-century knowledge.

BY 20,000 B. C.—this Neolithic Era —*homo sapiens* had sprung from the original Cro-Magnon stock. Now the great prehistoric war of the species was going on. Spreading and conquering, Homo Sapiens was killing off all the races of sub-men. Very likely, the Scandinavian Peninsula was the last stronghold of the sub-men, with its Heidelberg and Neanderthal population.

Homo Sapiens must be pressing at all sides. Asgard, a tiny island of Cro-Magnon in the heart of sub-man territory, must be an object of bitter hatred to the Giants and Dwarfs. For Cro-Magnon, with slight variation, was Homo Sapiens—modern man.

The Asgardians knew nothing of such larger issues. To them, all the world seemed filled with the Frost Giants and ugly Dwarfs, seeking their extinction. Knowing the hopeless odds against them, they spoke of Ragnarok, the day of doom.

The Twilight of the Gods, as it had come to be known in fable.

"It's terrible!" Eve whispered more than once. "Why must this beautiful castle go? Why must these people die out? Adam, isn't there anything we can do to help them—to prevent the tragedy?"

"Against destiny?" I shook my head slowly. "Fable—or its core of history —decrees Asgard's fall. I doubt anything we might try would do any good. . . ."

CHAPTER VI

The Frost Giants Attack

I WAS interrupted by the clarion blast of a trumpet that rang through every room of the castle.

Loki started.

"The alarm blown by Heimdal, our guard on the bridge!" he cried. "It means the Giants are attacking again. They have been pressing us savagely of late."

He darted away, to help in the defense of their castle. I followed with Eve. I wanted to see the legendary Frost Giants—or Heidelberg sub-man of the snowy north regions. What would this ancient battle be like?

The Asgardian forces were streaming from the castle over the Bifrost Bridge. It was their first line of defense. To see closer, I stepped on the bridge and began walking. At close quarters I saw that the structure was rickety, from great age. It swayed as the Asgardian warriors rushed along. At my rather ponderous tread, the bridge actually began to vibrate and rattle.

A hand pulled me back. It was Loki again.

"You can't use the bridge, Adam Link!" he snapped. "You'll shake it down, with your heavy steps. Go back. What business have you here, anyway? You are only in the way."

I stepped aside as a dozen men leaped along the narrow span. I nodded at Loki's wise judgment that the bridge could not stand my weight.

"The time-ship!" I said to Eve, pulling her toward the courtyard. "I still want to see this battle."

In the time-ship, we took up a position just over the head of Bifrost Bridge, where its cables attached to the mainland in great blocks of hoary-old

concrete. The congregating Asgardians hardly noticed us, in their excitement. A man still stood blowing tempestuously on a great curving horn.

Heimdal and his horn that could be heard around the world! Heimdal, the Watcher of Bifrost Bridge, who had trained himself to hear grass grow, and could see all around him for a hundred miles, in dark as well as light, and who never slept! Such was the Heimdal of fable.

Heimdal, the man, was simply a guard who had spied the enemy sneaking near for attack, and had blown his horn which could be heard a mile, anyway, if not around the world.

I looked now for the enemy.

They appeared charging from behind big boulders and knolls of the rocky country, streaking toward Bifrost Bridge. Several hundred of the Frost Giants. Heidelberg Men they obviously were, seven feet tall, built in proportion. Their shoulders were hulking, their long arms knotted with gorilla-like muscles. They were not hairy, like Neanderthal, but their leathery hides showed they could resist cold and bruises almost like an elephant. They wore hide breeches and belts as scanty clothing.

Their faces were not particularly brutal. They were close to human, and inferior to him only in the telling scale of mentality. It was apparent in their weapons, for instance. They had great knotted clubs, stone-headed maces, bows-and-arrows, and fire-hardened spears. But no swords. They had never solved the secret of metal-smelting. They were true Stone Age citizens, at the peak of their development.

But they were a formidable fighting force.

I LOOKED at the Asgardian forces, clustered before the bridge-head in a grim semicircle. Not more than a hundred men, all told. They wore slight, but helpful armor—leg-guards, chest-plates and visors. Odin stood at the head, in armor of copper-hardened gold. His golden helmet was surmounted with the carven image of an eagle. This picture of him had gone down unerringly in fable, if nothing else. His one eye gleamed ferociously at the enemy.

The Frost Giants charged in a body, yelling bestially, and the battle began.

It was simply a free-for-all, man to man, without thought of strategy on either side. Arrows from the Asgardians had dropped a few of the Giants, but the rest came close and began swinging their ponderous clubs and maces. At the first brunt of meeting, the Giants, superior in men and weight, had driven the defenders back.

But the Asgardians brought their swords into play. Cleverly they feinted and stabbed and leaped nimbly away from the clumsy Giants. The struggle was about even. Two Giants fell with ripped vitals for every Asgardian with a cracked skull.

"Horrible!" came Eve's whisper in my ear. "The Asgardians are so noble in contrast to those ugly, monstrous sub-men!"

Each time an Asgardian fell, she shuddered, as the women of Asgard must be shuddering back at the castle.

"Every man they lose," Eve continued, "brings their Ragnarok that much nearer—the Twilight of the Gods. Adam—"

I shook my head again, for what could we do against immutable fate? And there was another consideration.

"Eve, stop it!" I snapped. "I know how you feel. I feel the same. We have a kinship with these doomed people, for they are the ancestral stock of the race that created us—in the future.

But you also know how I feel about using our robot powers in warfare of any kind. How I've sworn the robot must never be used in the destruction of human life."

I had destroyed eight brother robots, only a few months before in California, because they wanted to conquer Earth —fight humans. Robots must not earn the name Frankenstein, whether in this age or the next, by taking human life.

"Human life!" Eve shrilled at me. "But those Heidelberg men *aren't* human!"

I jerked. A bomb seemed to burst in my brain. No, they weren't human after all, in the strictest sense of the word! And in turn, they were killing off true humans, Homo Sapiens, my creator race.

"Good Lord, Eve," I said. "At times I'm really a fool."

I flicked the ship to the ground, opened the hatch. "Stay here, Eve," I told her. "If anything happens to me, you can find your way back to the 20th century."

I STRODE toward the battle area. No, I ran. And as I ran, I let out a furious bellow. The full tide of rage flooded through me, to think of brute sub-men killing members of a race so much nobler and finer.

The battle almost stopped. Asgardians and Giants both looked around, at the thunderous cry. Surprise came into the Giants' eyes—surprise but not fear. They took me for a belated Asgardian warrior, one dressed more completely in cowardly armor. The battle resumed. Two Frost Giants leaped at me, swinging their knotted clubs.

I let them come close. I caught one club and hurled it a mile out into the sea. I took the other club and snapped it in half like a twig. The two Giants were impressed, but still no fear rose in them. With snarls of anger, they grasped my body. One tried to choke me. He pressed till his finger-joints cracked, grunting in amazement. The other grasped me around the back and heaved.

I was amazed, in turn. For I was lifted clear off the ground and hurled with stunning force to the rocky ground. No human could ever have such strength. One of the Heidelberg Men would easily be a match for a gorilla.

I heard Eve's shriek, and twisted aside just in time. One of the Giants had picked up a boulder three-feet in diameter and hurled it down at my supine form. It would have crushed even my metal body.

I bounced to my feet. I wasted no more time. I took them both by the scruff of the neck and banged their heads together. I had to bang three times before they went limp. I think the fossil skulls of Heidelberg Man found in the 20th century attest to a thickness unknown in human skulls.

I didn't underestimate the Frost Giants after that. I exerted most of my machine-powers. I waded into the thickest of the melee, punching my metal fist at each Heidelberg head I passed. Short-arm punches with the power of a steam-driven piston behind them. Frost Giants dropped like stones.

I reached Odin's side, in the center of the most violent fighting.

"Out of my way, Odin!" I roared, brushing aside a club. "Let me handle these prehistoric thugs!"

He didn't know what I meant—but he saw what I meant.

A dozen Giants converged on me, as I rammed into their ranks. At least ten blows of clubs and maces rang on my metal body. One blow against my skull-piece even made me reel a little. But I

had a harder skull than any Heidelberg Man.

I had two weapons—my two balled fists. I went down the line, punching, and the Giants stretched out almost in a row. Odin lowered his sword, as suddenly he was free from menace. He couldn't understand it.

I WENT for the next nearest cluster, where Tyr and Frey held off six Giants. Tyr's great sword slashed at a Giant and missed—but the Giant gave a clipped groan and fell. He never saw the lightning blow from my fist. When Tyr turned to stab at the next Giant, he was down too. And the others. I moved faster than the reflexes of the human mind could follow.

It penetrated into the collective thick skulls of the Giants finally that something was wrong. Who was this terrible Asgardian warrior who roared like thunder and smote like lightning? They quite suddenly decided not to stay and find out. With half their number laid out cold, the rest fled.

I pelted them with boulders as they ran. I dropped Giant after Giant this way, with an accuracy that left the watching Asgardians gasping. The last retreating Giant was just vanishing behind a knoll, a mile away, finally. Allowing for the wind, I cast a rock weighing about ten pounds. It caught the Giant fair and square on his skull, sending him asprawl.

Yet he lay stunned only a moment, then picked up and staggered to safety. And now the Giants I had knocked out came to, and began loping away. I had swept down their ranks too swiftly to deliver killing blows—at least to their powerful frames. Besides, subhuman or not, I still felt a repugnance at the thought of actually killing them. I was satisfied that I had driven them away.

"After them, men!" Odin now yelled, like a true opportunist. "The Giants are dazed, helpless. Stab them while they flee!"

"No!" I roared, not liking that at all. "Let them go. Let them return and tell of how they were defeated so quickly. It will do more than anything to keep them away."

Odin glared at me.

"Adam Link," he snapped, "I am King of Asgard. My word is law. I say—"

Loki interrupted. "Adam Link is right, brother Odin. Let the beaten Giants take back the tale of a mighty warrior who guards Asgard and cannot be defeated!"

Odin now transferred his one-eyed glare to his half-brother.

"Anything to spare your step-race, eh, Loki? You fought only half-heartedly for Asgard. I did not see you bring down one Giant." He shrugged then. Loki had after all been the son of Odin's father.

Odin nodded to me. "You have spoken well, Adam Link. Let the Giants go. Perhaps they have learned a lesson." Suddenly his eyes shone. "You are a mighty warrior, Adam Link! I invite you into my war-councils hereafter!"

CHAPTER VII

In Defiance of Time

THERE was a war-council held that same day. Before my coming the Giants had attacked periodically at the bridge. It looked ominously like an attempt to wear down the Asgardian forces, in preparation for a larger assault soon.

"With you to fight for us, Adam Link," Odin said eagerly, "we may hold them off indefinitely!"

"One moment," I said hastily.

"That's a lifetime job. I cannot accept. Remember I am here only to find Thor, or some clue to his existence in your past—or future."

"Future?" Odin said vaguely. "There is only one future facing Asgard. Ragnarok, the day of doom! It has been settling about us like a cloak for centuries. It is not far off. Unless —unless you become our champion, Adam Link. Your mighty powers will save Asgard from extinction!"

I hesitated. How could I refuse that solemn, tragic appeal? How could I explain that I did not wish to tamper with destiny—and destiny had decreed the fall of Asgard? And yet how could I coldbloodedly refuse help, as if my heart were made of stone—or metal?

I drew up, as a thought came to me.

I asked a question first. "Why didn't you use the flame-gun to blast your enemies?"

"Because there are only a few charges left in it," Odin replied, sadly. "We do not know how to make more charges. It is a secret lost in the past before the Great Cold. We must save the few shots for a real emergency, when the Giants attack in full force."

"Then I'll do this much for you," I said. "I'll examine the gun, and try to make more for you. Perhaps I can build many, so that you can surround your castle with them and hold off attack indefinitely." To myself I said: "If your Ragnarok comes even then, it will be your own doing."

"More guns?" Odin's eyes lit. "Yes, they would save us. And with them we might even go out against the Giants, on the offensive, and clear them away from this region!"

I noticed that Loki started, hearing this. I could see that though he was loyal to Asgard, he didn't like the thought of his step-race being exterminated like vermin. I decided then and there to make the guns so heavy that they could be used only as stationary defense.

Further than that I would not go, against the written script of history, or fable.

IN the following days, I spent most of my time with the flame-gun. Its principle escaped me, at first examination. It was some form of atomic-energy, I was sure, but how was it released? Stepped-up radioactivity? Breakdown of Uranium-235 into barium, as in 20th century research? A miniature cyclotron trigger knocking out high-speed electrons?

The core of the machine was a box encased in age-adamant iridium, like my iridium-sponge brain. In there lay the secret. If I forcibly opened the case, however, I might ruin the internal mechanism. The Asgardians would then be without a flame-gun at all. I would bring Ragnarok closer!

I needed an X-ray. I began constructing one, seeing that I had a job ahead of me. I collected bits of metals from odd corners of the castle's debris —platinum, tungsten, molybdenum. I devised an electric-furnace with a clay pot and battery-power from my reserve batteries in the time-ship. I made wire and filament. I fused glass, unknown to these Asgardians with their lost knowledge.

All this took time. I was a scientist building my laboratory and its tools of science as I went along. Eve helped me as much as she could. But at times, striking a snag, I would snap at her irritably, and she knew when to leave me alone.

She spent these times with Loki, who seemed fascinated with us. He had an inquiring turn of mind. He asked many questions about us, of Eve, and I think he alone of the Asgardians fully

understood just what we were and where we had come from.

Eve, in turn, mingled with the Asgardians and learned much of them. She recited the things to me. She talked with Baldur and his wife Nanna. And Tyr, Hodur, Bragi the poet, Njord the mariner, Skirmir, Hoenir, Frey, and Freya, his beautiful sister. Names of undying legend!

Reminiscently, Loki in his rambling talks told many tales of their life in Asgard castle. How Frey and Skirmir had once adventured in Jutenheim, land of the Frost Giants, and captured one of their girls whom Frey married, the girl being surprisingly lovely for her race. This was the legend of Frey losing his "magic" sword in quest of a wife.

How Odin in his youth had hunted for game in the Giant territory, and stopped at a cool well for a drink. A Giant, Mirmir by name, had attacked him, and Odin lost his eye. According to the fable, he had traded his eye for wisdom. In reality, the only wisdom he had gained was experience in keeping on better guard when outside the safety of Asgard's ramparts!

LOKI also told defensively of a time not long before when Iduna had been captured by the Frost Giants. In his version, he had simply invited her to walk over Bifrost Bridge, to pick apples on the mainland. We gathered from that, Eve and I, that Loki secretly yearned for Iduna's love. Giants had captured Iduna, and driven Loki away. Or had Loki *delivered* her, in rage at being spurned perhaps? At any rate, angry Odin had told Loki, his half-brother, to either rescue her or never come back to Asgard. Loki, through his half-kinship with the Giants, had lulled their antagonism, slipped Iduna away, and brought her back. The pursuing Giants had chased them right to Asgard, but had been shot down by the flame-gun. In the legend a Giant, in the shape of an eagle, had tried to fly into Asgard, but a "ring of fire" scorched his wings and he fell!

"We're seeing legends in the making, Adam!" Eve would say. "The adventurous doings of these unique people will be embellished with 'magic swords,' 'wisdom wells,' 'enchanted eagles,' 'rings of fire,' and all the other paraphernalia of superstition. Lindbergh, too, in 20,000 A.D., may be credited with having flown the ocean in a 'magic chariot' that roared with the voice of a demon!"

"Yes, yes," I said testily, my mind laboring to make a vacuum-pump without one lathe to machine the parts. "Don't bother me, Eve. Can't a woman ever understand when a man's busy?" The next moment I looked around. "But what about Thor? Have you heard anything of him?"

I had not forgotten my original quest.

Eve looked puzzled. "There is a complete absence of tales about Thor, the thunder-god, or his wife Sif. Either we're too early for him, in Asgardian history, or he has been a sheer invention by the later tellers-of-tales about vanished Asgard."

Vanished Asgard! But here I was trying to save Asgard! Even if it meant a shift of destiny. At worst, it would mean a branching of otherworlds—a rebound of divergent events in the entropy-zones of time. At times I had a subtle dread of the consequences. Yet my heart had gone out to these people, staving off extinction. There is something about a fight against odds that calls out the most in a man—or robot.

ONE day, Eve failed to appear for a long time. I sat cursing, wonder-

ing why she did not come to comfort me, for I had hit another snag in my science labors.

After ten hours, I knew something was wrong. I went below. I found Loki, but he professed not having seen Eve for hours. She had wandered off alone.

"Eef?" said Odin, when I queried him. "I don't know. But how soon will you have our new flame-guns?"

"Damn your flame-guns!" I retorted. "I'm going to find Eve if I have to ransack this place from top to bottom."

And I did. It took hours. The castle seemed an endless, bewildering maze of halls and rooms. I found a dank, forgotten dungeon finally, in the cellar below. Eve lay in a corner, among a mass of spider-webs.

I think my roar very nearly shook down the walls, as I ran up anxiously and looked. Eve's *body* lay there—but her head was gone! It had been unbolted from the neck-piece. It had been a rough job. Torn wires dangled from the relay system below the neck line.

I roared again. Who in Asgard had done this thing? Who had dared touch my Eve?

I carried the body up. Half-way to Odin's quarters, most of the Asgardians met me.

"What is the matter?" Odin asked. "We almost thought an angry dragon had slipped in somehow."

They turned pale as I advanced on them, swinging my arms. No dragon —or dinosaur—could have scared them more as a spark or two shot from my overcharged locomotion centers. My voice was still thunder.

"Who detached Eve's head and took it away?" I demanded.

They all looked blank. All except Loki. I read facial expressions clearly with my sharp mechanical vision.

I whirled on Loki. "You saw her last. Why did you do it? Where is Eve's head?"

"I know nothing — " Loki began, then lost his nerve. With a shriek he fled. He was the culprit.

I put Eve's body down and chased him. He was fast, with his heritage of powerful muscles from his Heidelberg parentage. I chased him from room to room. In my deadly eagerness, I once or twice blundered into walls, knocking off pieces of stone. Loki kept just beyond my finger-tips.

Finally, in a high room, I had him cornered. There was no other door out. His eyes popped as I advanced on him. Abruptly he leaped from an open window. He plummeted thirty feet down into the Straits between Asgard and the mainland, and began to swim for shore.

INSANELY, I almost plunged after him. If I had, I'd still be lying at the bottom, completely short-circuited, to slowly rust away through the years.

I ran for my time-ship instead. In that I darted over the water. Though he swam like a fish, Loki couldn't get away. Reaching one hand through the hatch, I fished him up. He stood dripping and miserable before me.

"Speak!" I demanded, shaking him till his teeth rattled. "Where's Eve's head?"

"Hidden in my room," he chattered.

"Why did you do it?" Suspicions were crawling in my mind.

"As a prank," he returned. "Don't be angry with me, Adam Link. I did it as a practical joke. Sometimes life is dull in Asgard. I play jokes on all the others. I did not know you would fly into such a rage."

I relaxed. In fact, I was suddenly laughing, within myself. Of course! Loki, in the fables, was the "mischievous" god, the one who played many

jokes on his fellow "gods." Why had I allowed myself to go berserk?

Why had I even entertained the thought for a moment, that Loki darkly thought of destroying Eve's head entirely, after satisfying his natural curiosity over the metal-brain? Or that he wished to destroy me too, so that I wouldn't make more flame-guns with which to scourge his step-race, the Giants? Foolish suspicions. It is human to look for a little fun, as Loki had, even in the grimmest circumstances.

Loki went on, sensing my anger gone.

"It was funny, you chasing me through the halls," he laughed. "I thought of the prank when Eve stopped once, complaining of a headache. She said it was caused by a—a short circuit. She asked me to turn off her control-switch for a moment, and then bend a certain wire. When she went limp, I couldn't resist unscrewing her head and hiding it. Just a practical joke, Adam Link. Will you forgive me?"

I slapped Loki on the back, to show no ill feeling. When he got his breath back, he led me to his room. I reattached Eve's head to her body, soldering the torn contacts with the time-ship's kit of tools. She came to life at the turn of her chest-switch, unharmed in any way.

She laughed, too, when I told the story.

"Adam, you poor idiot," she said, "getting so excited over nothing. You would have torn down the walls if you hadn't found me, most likely."

Her mechanical tones did not display the tenderness she implied, though I knew it was there.

"Yes," I said. I have never yet told a lie.

The incident was forgotten, though I decided to keep an eye on Loki in the future.

CHAPTER VIII

A Bride for a Giant

SOMETHING of far greater significance burst the next day.

"Adam Link!" Odin came running into my work-room. "The Giants have just sent us a message of threat. Have you made any flame-guns?" His face fell at my negative. "Come below to the council. This must be discussed carefully."

All the Asgardians had gathered in Odin's throne room. Frigga, his wife, sat beside him. Odin told the Frost Giant messenger to repeat his ultimatum.

"Thrym, mighty King of Jutenheim," spoke the messenger gutturally in a sort of pidgin Asgardian, "demands the beauteous Freya as his wife! If she is not sent to him before the sun rounds the sky, Thrym will gather all his army and destroy Asgard. He awaits Freya at the Fort-by-the-sea."

Glaring around belligerently, the Giant left, escorted by several guards.

There was silence in the room. The Asgardians looked at one another in mingled disgust and fear.

"Thrym once saw Freya," Odin explained, "in a battle before the Bridge, in which our women fought alongside our men. Ever since, before each attack, he offers the same truce terms, desiring her."

All eyes turned to Freya. Her golden-blonde beauty was such that I think all men must worship it at first sight. No wonder it had turned the heart of an ugly Frost Giant, whose women were on the average coarse and unshapely.

Odin raised a weary head.

"My people, listen. This attack may mean the downfall of Asgard! We've been so drained of fighting men in the past generation that Ragnarok is near.

I say this honestly. Now, as is my custom, I ask you this—shall we give our Freya to Thrym?"

"No!"

The word thundered back instantly, from all their throats.

Odin smiled proudly. "Asgardian heads never bow, even under the axe of doom." He sighed. "Well, we will fight to the last."

He looked at me sadly. I had been his last hope, if I had succeeded with the flame-gun. "You are a strange being, Adam Link. But I am not your king. I will not ask your help in battle, since you do not wish to give it."

I felt utterly vile at that moment.

Loki's voice sounded. He had sidled up with an enigmatic leer.

"But perhaps Adam Link can help in another way," he suggested. "The Giants are stupid. They can be tricked. Suppose Adam Link is sent as the bride, disguised? Eva told a story once of his using human guise!"

"As the bride?" I gasped. "But why?"

"To kill Thrym," Loki returned quickly. "Will you do that one thing for us, Adam Link? With Thrym gone, they will be temporarily leaderless. They won't attack for a time. It will give you time, then, to finish making flame-guns."

A great cheer welled in the hall. The idea struck instant reception.

I tried to refuse. Tried to say that it might not be sound logic. Would it make the Giants leaderless—or make them utterly determined to destroy Asgard? And what motives did Loki have, he who carried the blood of both races in his veins?

I looked at the appeal in Odin's one eye. The appeal of a people wearied of attack, and pressing doom. How could I refuse, and call myself human? For though a robot, my whole emotional life is that of a human being. I believe that. Now was the time to prove it.

"I will do it!" I said abruptly. "I'll do more than kill Thrym. I'll put such a scare into the Giants that they will not soon molest Asgard again. If need be, I'll lead your forces against them!"

The Asgardians seemed stunned. Odin raised his eyes.

"Adam Link will be our champion!" he breathed. "Asgard is saved!" And the answering cheer from the people rang from the rafters.

Eve was startled.

"Adam, you've committed yourself! To save Asgard would be contrary to destiny, as we know it. You said it yourself more than once. And what about finding Thor?"

"Thor be damned!" I exclaimed. My blood was fired, now. I suddenly wanted more than anything to help these grave, sad, magnificent people. Save them from harsh extinction. Save beautiful Asgard from the heavy hand of destruction.

Destiny be damned, too!

PICTURE me, if you can, as a "bride." Perhaps it sounds ridiculous. As once before, when I had played detective, I was disguised as a human. I had gathered materials in the castle and made a flesh-colored plastic. Smeared and dried over my metal frame, it suitably gave me the contours of a human female, though a rather broad, heavy-set one.

Fortunately, as a "bride," I could wear a collection of draping clothing and veils. A filmy gown covered me from neck to foot. Gauzy veils over my plastic face-features hid them enough so that they could pass for human. We went in the evening, to better the deception.

Loki was my official escort from As-

gard, because of his full knowledge of the Giant tongue and ways. In my time-ship we landed within a half mile of the designated place where Thrym awaited his heart's desire. This Fort-by-the-sea was a stronghold that the enemy had established within ten miles of Asgard, as a base from which to periodically attack.

A sentinel challenged us in the moonlight, but when he saw my figure draped in fine clothes, he grinned broadly and led the way into the fort. We had arrived just under the deadline of 24 hours as set by Thrym. My mechanical vision, almost as good in dark as light, surveyed this camp of the enemy. I saw that they had amassed a huge army, perhaps a thousand.

The Fort-by-the-sea was little more than a great barn of solid logs and a thatch roof—the height of architectural ability in Heidelberg Man. A blazing fire had been lit in the center of the space, on dirt floor, its smoke swirling out through a vent in the ceiling—theoretically.

Loki nudged me, as we entered.

"Cough!" he whispered. "You are supposed to be a delicate human female."

I conjured up "coughs"—or static rattles in my microphonic sound-box. In the uncertain glow of the fire—the only illumination—I knew my physical disguise would easily hold. At least to the stupid sub-men with their color-blind eyes. All sub-men had poorer eyesight—and better noses—than true humans. Closer to the brute.

THE interior was filled with about fifty of the privileged Giants. A long rough table at one side was loaded with half-cooked grains, raw vegetables, ripe fruits. Two whole oxen were being turned on a spit over the roaring fire. The "wedding" feast had been prepared. It would have been a pre-battle feast, if the "bride" had not come.

Thrym, King of Jutenheim, sat in a great chair made of human bones woven together with hide strips. It was a symbol of his hatred for the human race. I looked him over carefully, as Loki led me directly before him.

He was a hulking monster of a sub-man, closer to eight feet high than seven. His arms and legs were thick posts. He could not weigh less than I, about 300 pounds. His over-sized features jutted craggily, and his tongue licked constantly over thick, brutal lips. I shuddered. I could picture a human woman submitting to his embrace, and going instantly mad with loathing. No wonder the Asgardians chose to face extinction rather than toss the beautiful Freya to such a revolting fate.

Thrym had strained eagerly forward on his throne, watching me stride up. An unholy lust gleamed from his eyes, as his soon-to-be "bride" approached. But abruptly, as I drew near, a frown came over his face. Veils, and dim light, could not entirely hide my ponderous step and powerful frame.

"Is this Freya?" he mumbled. "Freya, who is slender and lithe?"

I understood his native tongue, for again it derived from root-words that have survived since the first more-than-ape made articulate grunts as a means of communication.

Loki answered quickly.

"It is rather cool this evening, O Thrym, mighty king of Jutenheim. Freya is after all not like your other women, but must wear heavier clothing. The clothing bulks. I assure you Freya herself does not."

Thrym's suspicion vanished.

"Begin the feast!" he roared. He leaped down and grasped my arm, to

escort me with clumsy grace to a place beside him. I could feel his fingers clutching my unyielding arm, expecting to feel soft tender flesh. His eyes opened wide.

"Has Freya the arms of a hard, muscled man?"

Loki spoke even more quickly than before.

"She is tense with joy at seeing you, O Thrym. And she is not an utter weakling, for you yourself saw her battling."

The dull-witted Giant swallowed that too. I sat at his side. The smoking, burnt ox-meat passed along the table. Thrym took a quarter-shank in his paws and wolfishly tore great bites from the bone. He ate three times what a human could have managed before he noticed I ate nothing.

"She is too excited to have an appetite," Loki explained.

HUNGER appeased, Thrym turned his closer attention to his "bride." His eyes looked straight into the veil over my plastic face. He peered for a long moment.

"Why are her eyes so piercing?" he demanded suddenly, again suspicious.

"She has not slept for a week, in anticipation of seeing you," Loki flattered again.

Thrym subsided with a growl, but I knew the game could not last much longer. I had not prolonged the farce for the enjoyment of it, though I was amused. Mainly, I had been looking the situation over. I could not afford to be careless, in the heart of the enemy stronghold. The Giants were powerful men, and there were many of them. To kill Thrym would be simple, but what then? My eyes darted to all corners, taking in every factor.

I started as I realized Thrym was addressing me.

"Speak!" he commanded. "You have not said a word, Freya. Let me hear your voice."

Loki tensed, beside me. I think he feared that one syllable from my phonic voice would give the whole thing away. But I surprised him. I simply pitched my tone up to the feminine octave.

"You are a great and wonderful man, O Thrym," I said sweetly, gaining another moment's time. I added, in English: "And the biggest boob on two feet."

He gave a roar of delight. And then his great arms encircled me and his brutish face came at mine for his first kiss. The slobbering lips drew back, abruptly. Thunderclouds came over his face as he felt the unmistakable hardness of my body. He gave another experimental squeeze. It would have crushed the ribs of a woman. It only bruised his arms.

With a horrible oath he ripped away the veils, exposing my face. The rough plastic job was revealed. By no stretch of imagination was it the sweet, lovely face of Freya. He leaped up, roaring like a wild animal.

CHAPTER IX

Adam Link, Giant Killer

"YOU have deceived me!" he bellowed. "I'll attack Asgard at dawn. But first, I'll twist your head from your body!"

He gave a tentative yank. With his great strength, he very nearly ripped bolts loose. I leaped free.

"You die, Thrym," I announced clearly. "You die for all the lives you have taken from Asgard."

Ignoring the threat, he came at me like an angry bull. One of his enormous hams banged against my head, breaking all his knuckles. Amazed, moaning

with pain, he threw his arms about me bear-like, squeezing. Even a gorilla might have succumbed to that mighty embrace. I squeezed him, in turn. His ribs snapped.

Then, not wishing to prolong his agony, I picked him up in my two hands like a rag-dummy and threw him against the solid wall, twenty feet away, with such force that his skull cracked like an egg-shell.

Thrym, relentless enemy of Asgard, was dead!

But my mission was not quite over. All the previous episode had taken only seconds. The other Giants had watched in paralyzed fascination. They could not believe now that their mighty king was dead. They were stunned.

I moved with my full speed.

First I grabbed up Thrym's club, from beside his throne. It was of solid oak, six feet long, knobbed and weighted with stone. Flicking it lightly, I ran down the line of sub-men, cracking their skulls. I was merciless now, serving death at this table. I had committed myself to Asgard. I was fighting for the human race, against creatures who know no mercy themselves.

I laid out half their number before any of them retaliated. Then, with wild cries, they snatched up their clubs and ganged on me. Or tried to. I moved back and forth among them with smooth, unmatchable speed, picking them off methodically.

Then Giants poured in from outside, hearing the commotion. A hundred to one they faced me. But not one of their clubs could strike me except for glancing blows that knocked off my plastic disguise. Now I stood before them in naked metal, sparks shooting from my joints, as always when my locomotion-centers are surcharged in action.

"Die, enemies of Asgard!" I thundered with each killing blow of my blood-spattered club.

"It's the mighty warrior of the bridge!" gasped a Giant who had obviously been there. "Call in all the men!"

AND Giants began to pour in till there was hardly room to move. I was in danger now. Blows began to rain down on me, denting my body. I could not kill them all in less than an hour. And in an hour they would succeed in pounding me to bits.

I changed tactics. I ran into the fire and kicked burning embers into their faces, sending them screeching back. Then I proceeded to pull the place down. There were four supporting posts in the interior, long as telephone-poles. I put my arms around each and yanked them away. The roof came down. With one of the poles as a battering ram, sweeping Giants aside, I stove in the walls. The whole business came down on shrieking Giants in one rumbling crash.

I strode out of the ruins of the Fort-by-the-sea. A gasp of amazement came from those of the Giants who had not been able to crowd in. They thought surely I had been crushed myself. They made no move to come at me. Most seemed ready to run at a moment's notice.

I raised my voice to a thunder that I knew would be heard by every ear within a mile, if some had run off.

"Your fort, from which you attacked Asgard, is destroyed. Do not build another, or I will destroy that. I am the champion of Asgard, and will save it from your mightiest assaults. When you have chosen your new king, I will come to address him and warn him he must not molest Asgard. Now begone!"

The last word crashed through the air like an explosion. I waved my arms,

deliberately causing my electrical distributor to shove excess current through my body. From every joint and seam sprang livid sparks that lit up the night scene weirdly.

I thought of a curious name for myself, culled from another "fable." I was Adam Link, the Giant killer!

In silent awe and fear, the Giants melted away toward their home-land further north.

I STALKED back to my time-ship, well satisfied. I had done my part for Asgard. If the Giants dared attack again, they must be stupidly courageous.

I started as a figure loomed before the ship. It was Loki. I had completely forgotten him.

"I sneaked out at the first sign of hostilities," he said frankly. "And ran back here. I saw what you did, from a distance. Odin will be pleased. You did your job well, Adam Link!"

Almost, I could hear his thoughts add—"too well!" I wondered what the mysterious, secretive half-breed had in his mind. Had he hoped it would turn out another way, with Adam Link destroyed? Had he really expected to deliver me in the enemy's hands for riddance, not realizing himself what powers I had?

Loki would bear watching, I told myself.

Hilarity reigned in Asgard castle for the rest of that night, when the story was told.

"You are the mightiest being that ever lived!" Odin exulted. "With you as our champion, Asgard will survive. There will be no Ragnarok!"

No Ragnarok! A slight chill went through me. Immutable history changed! What paradox lurked like a crouching beast behind all this? I made a decision, not to go too far.

I addressed Odin.

"I cannot stay as your champion. I must still search for Thor, in your history. And then return to my native land, where important tasks await me. I will do this much. First, I will go back among the Giants and impress their new king with my powers, so that he will remember for a long time, even after I'm gone. Secondly, I'll finish making new flame-guns, with which you can defend Asgard yourselves. But I cannot stay."

THREE days later, I took a trip in the time-ship to Utgard, the capital of Jutenheim, boldly. I took Loki with me. He would work wholeheartedly with me, to bring peace between Asgard and Jutenheim, for I suspected that would quiet his torn sympathies.

We landed in the crude, slovenly village of thatched huts, just a step above the cave-life of Neanderthal Man. In the background loomed a glittering glacier, slowly retreating as the Ice Age waned.

Giants surrounded us as we stepped out, but no hostile move was made. They looked over my metal frame with plain fear and respect. I asked to be led before the new king.

King Skyrmir was not so huge a man as Thrym had been. His face was less coarse. I divined that he had an ounce more of brains, and could be diplomatic. Or cunning.

"I am Adam Link, champion of Asgard," I announced myself. "I have come to prove to you that I am the mightiest being on Earth. Give me any tests you wish, if you do not believe."

Skyrmir looked me over calculatingly. "I will give you three tests," he returned after some thought. "First, see if you can empty my drinking horn at one draft!"

I started. How had Skyrmir thought of that, in his aboriginal mind? For the one thing that was dangerous to me was any liquid in my vitals, creating short-circuits. I glanced at Loki narrowly, wondering if he had sent a message to the king, preparing these tests. But Loki was expressionless.

What could I do? If I refused to take the test, I would instantly lose prestige. I had to go through with it. I nodded, taking the foot-long drinking horn offered. It was filled with a dark brew. I sipped slowly, realizing my danger. One internal spark in a vital spot and I might fall down helpless. Their clubs could then demolish me in a short time.

I sipped the liquid, but gave the illusion of taking a long, steady pull. I felt the dripping fluid going past bare wires and live studs. If I took extreme care, the liquid would safely dribble down into my leg hollows and drain away.

Skyrmir watched me closely. I could feel Loki's eyes on me. Suddenly smoke spurted from my mouth. A short-circuit, within! A minor one, luckily, that only burned out one of a dozen fine, duplicated wires. But it was the danger signal.

I handed the horn back, shaking my head. I had only "drunk" half of it. I couldn't take a chance with more.

The Giant king curled his lip. "The mightiest being on Earth, yet you cannot empty a horn that my youngest son can down in one gulp!"

Stung, I half reached for the horn again, recklessly, but thought better of it.

"Give me some other test," I grated. "Test my strength."

SKYRMIR led me to what amounted to the village square. A crowd was gathered there, to see this strange event. The Giant pointed to a stone lying on the ground. It was moss-covered, hoary, as though it had lain there for an age.

"Lift that, Adam Link!"

How ridiculous! A mere stone weighing perhaps a ton. I put one hand under a ridge of it and heaved. The scrape of metal against stone sounded loudly, but the stone did not move! Surprised, I used both hands, but couldn't budge it. Finally, in exasperation, I got a new hold and applied the full leverage of my major leg muscle-cables. Gears w i t h i n me whined. Sparks crackled. Every cog strained to its utmost.

But I could not so much as raise it one inch.

I gave a furious, reckless heave. Every watt of power in me surged through my motive plant. One end of the stone came up just a foot, creakily. I felt as though I had lifted one side of a mountain. Or at least ten tons of dead weight.

"Can't you lift that stone any higher?" mocked Skyrmir. "You who are the mightiest being on Earth? Come, one more test. Wrestle with *our* champion, who is mightier than you!"

He led me now to an alcove in the side of a cliff-face. The lighting was dim. Something loomed before me, and Skyrmir pointed at it silently. It seemed to be a thick figure. I grasped it, to throw it to the floor, whoever or whatever it might be.

I think I was the most surprised being on Earth, rather than the mightiest, as my opponent stiffened and somehow threw me against the rock wall like a cannon-shot. Luckily I landed with my shoulder, denting it badly, rather than my skull.

I am human, mentally. I was utterly humiliated. I had failed to pass any of the tests with honors. A terrible

rage came up in me. I ran back to the figure, encircled it, and forced it to the floor. But only for a moment. Then it again reared, and flung me back reeling. A third time I tried, digging my heel-plates into the hard ground and hanging on with all my power. This time I held my adversary down for all of ten seconds, before he again arched up and whirled me away.

I told myself to give up. My mysterious wrestler—there was no way out of it—had more strength than I! What being could I be pitted against?

Lightning lanced in my mind.

"Thor!" I yelled.

I ran back, eagerly now—only to find the wrestler gone.

"Where is he?" I yelled. "Call him back! It must be Thor, another robot with a covering over his metal." I was still enraged too. "Call him back. I'll finish him if it's the last thing I do!"

A furious bellow answered me, from somewhere deeper in the cave. Was Thor a sort of "animal" robot—all power and little brain? Had the Giants captured him, from Asgard, perhaps centuries ago, holding him so that he could not help defend Asgard?

But then Skyrmir pulled me away.

"Enough," he said outside, before his people. You have failed in three simple tests. Go back, champion of Asgard! We do not fear you!"

The crowd jeered. But I saw something in Skyrmir's face—a look of hollow fear behind his mockery. And I detected an unmistakable bitter disappointment in Loki's features. Not over my failure—but my *winning!*

CHAPTER X

Ragnarok!

I GRABBED Loki's arm, squeezing. "What do you know of this, Loki? Tell me! Tell me or I'll—"

Loki talked, as his arm bone threatened to snap under my fingers.

"Trickery," he admitted. "The drinking horn was filled with a deadly poison. No living being could drink one-tenth what you did without dying on the spot.

"The stone is one with a thin base that connects to a much larger stone underneath. In lifting one end, you very nearly raised a buried mountain.

"And your opponent in wrestling was really—"

I did not have to hear more. Deadly poison in the horn! The stone like a submerged iceberg, with the bulk of its weight and size hidden. And the Thor-robot held in captivity, so that it might never again defend Asgard, as it probably had centuries before, beyond the memory of those now living. A robot could live indefinitely, if made originally with some self-charging unit for electrical current.

I had passed the tests with flying colors! I had proved more than ever that I was a being to be feared, with prodigious strength.

My thoughts clicked ahead rapidly.

Who had devised these tests, any of which might have wrecked me? One unlucky short-circuit with the liquid, one major gear stripping at the stone, one good crunch against the cave-wall by Thor—the one creature who had strength equal to mine—and I would have been helpless.

My stare was on Loki. Only he could have known, or hoped, that liquid poison might finish me, mechanically if not biologically. Loki was the instigator, hoping to destroy me so that Asgard would fall before the Giants.

I squeezed his arm tighter, snapping the bone.

"You have finally turned traitor to Asgard, Loki," I hissed. "I should have

seen it coming. You have sacrificed your human heritage now. Stay among the Giants. And you will not dare attack Asgard, while I am there!"

With that I leaped toward my time-ship. Loki screamed for the Giants to stop me, at any cost of life. A mass of them blocked my way. I leaped over their heads, landing by the hatch. I felled a dozen who attempted to grab me, and leaped in, banging the hatch tight.

When I sprang to the controls, I saw the full extent of Loki's treachery. He had sneaked in the time-ship, while I was busy taking the tests, and done as much damage as he could with a club. Fortunately, the metal parts had withheld somewhat. The controls were damaged, but not ruined.

I did a hasty, makeshift repair job, arising finally an hour later. During that time, the Giants had been battering at the ship with huge battering-rams, hoping to smash it. But I had built the hull sturdily. They bashed in all the windows. The apertures were too small for any Giant to crawl in. Toward the last, with Loki screaming orders, they had built a huge fire around the ship, heaping logs on it. The flames heated the hull. When I arose, the metal glowed cheery-red. The interior was furnace-hot. Any human would have shriveled to a crisp.

But a robot can laugh at heat. In the air, the ship cooled rapidly. I wobbled back to Asgard, and landed the ship with a bump that shook my makeshift wire-connections loose again.

I HAD little time to tell my story, for the Giants attacked that same day, led by Loki. All the legions that Thrym had gathered, in case Freya were not presented as his bride, marched toward Asgard.

Odin's eyes numbed, as he looked from the high tower.

"Thousands upon thousands!" he whispered. "This is the greatest attack known. And Loki leads them, with his arm in a sling. Loki, the son of my father—"

His voice broke. Then he straightened, girding on his golden armor grimly.

"Ragnarok!" he muttered half to himself.

"No!" I ground out. "I won't let it be! I'm your champion. I'll save Asgard, and to hell with destiny!"

He looked at me in tragic calm.

"You have mentioned destiny often, Adam Link, as though it is written that Asgard must fall. Perhaps it is so. You have done your best for us!"

He went below, to face the enemy.

"Done my best—and failed!" I groaned to Eve. "Is this destiny's hand, after all? Destiny that Loki is attacking before I finished the flame-guns? And while our time-ship is useless? Still, I can fight them—"

Another disturbing thought struck me.

"Loki seems confident, now is the time to strike, in spite of my presence. Why doesn't he fear me? The Thor-robot—perhaps it's just a dumb, witless machine that will obey any voice. It fought me in the cave. Will Loki set Thor against me—the only creature who has a chance against me?"

What a reversal of fable-history that would be—Thor helping in the downfall of his own Asgard! But then fable could hardly be accurate about all the things of a dim antiquity.

"I almost wish you hadn't discovered Thor," Eve murmured. "It's so disappointing. A mere, dull robot, probably left from the days of Norse civilization, used first by the Asgardians as a fighting machine, and now by the enemy. All the glamour, and splen-

did heroism of the Thor of fable turns out to be sheer invention."

Heimdal's horn sounded suddenly in a crescendo, from outside by the Bifrost Bridge. The attack had started!

I started below.

"The flame-gun!" Eve reminded. "Odin neglected it. Is he that certain there is no hope—"

I had forgotten the gun myself. I sprang to it, aimed. When I pressed the trigger, a livid blast of infra-energy hurtled through the air. A hundred of the advancing Giants fell as shriveled, blackened corpses. But the legions came on.

I fired twice more, and then the gun was silent. The last symbol of ancient might flickered out. Ragnarok was at hand!

I refused to accept it. Asgard must not be taken.

"Work on our time-ship, Eve!" I rasped out. "Repair it as fast as you can. With that, we can stop them. In the meantime, I'll help in the defense of the bridge-head."

I RACED below. I had no way of getting there now except by crossing the bridge. But my first few ponderous steps set it to shaking and vibrating dangerously.

"Njord!" I called. "Where are your boats?"

Njord, the mariner, led me below to where docks extended into the water. I unhooked the largest of the flat-bottomed boats and rowed out into the Straits. It was slow going. Already the advance forces of the Giants had arrived at the bridge and were engaging the Asgardian force there.

Loki's figure appeared at the bank, looking out over the water. I could almost see the writhing hate in his face, at sight of me. And the cunning. With Loki as general, the Giant forces were a formidable threat.

I saw him giving orders. Giants dragged up huge wooden structures—catapults. Loki had probably had them secretly built weeks before, planning the downfall of Asgard. Huge boulders arced across the water at my boat. Their aim was bad, so that I got within fifty feet of shore, without danger. But then boulders began to whiz all about me. One came straight for the boat. I caught it and hurled it back, wrecking one of the catapults.

But I could not catch or stop the huge boulder that finally stove in the bottom of my boat. Water pushed up. Water—to me the most deadly menace in the world. I would sink like a stone and lie forever at the bottom of the Straits.

I leaped from the boat before it had filled. I put everything I had into the effort. I sailed twenty feet through the air, like a metal acrobat, to the steep bank. I clutched a shrub growing there. It held, though half its roots snapped. It was all that saved me from oblivion.

As I rose to the bank, Loki met me with another threat. He had concentrated all his offensive powers against me, knowing I must go before Asgard would fall. Red hot stones hurtled toward me, from the catapults. A shower of them. They were meant, I suppose, to scorch me and bring me pain. It was a curious sidelight as to how Loki, though he knew I was metal, still thought of me as a being who could know pain. Half of Loki's brain was that of a muddled sub-man.

I DODGED the stones with lightning reflexes. I caught one here and there and hurled it back with greater speed. More than one Giant was crushed by each missile as it plowed into them like a cannon-ball.

Then I reached the catapults and toppled them, and flung the remaining ammunition they had gathered into the ranks of Giants beyond. I cleared myself a path, reached the bridge-head, and joined the valiant band of defenders there.

Why hadn't Loki yet sent his Thor-robot against me? Was he biding his time, waiting for the Asgardians to weaken, so that while Thor and I tussled in a mighty battle, the Giants could swarm straight to the castle?

I had no time to speculate further. I was at the bridge.

As in the previous battle, Giants fell steadily before the flicking swords of the Asgardians. But this time the enemy had come in numberless hordes. Asgardian arms grew tired. I saw Frey fall, and the poetic Bragi.

I swept up Frey's fallen sword, and wrenched a club from a Giant, bashing in his brains. Then, wielding the two weapons, I waded into the attackers. I called forth every ounce of speed, dexterity and power at my command. Giants fell before me at a faster rate than the human tongue could count their deaths.

But on they came, as if poured from the sky. Loki had somehow impressed them with the fact that they must win now—or never. Must destroy Asgard before Adam Link, their mighty champion, could repair either his time-ship, or turn out flame-guns.

I saw Odin's face, noble and tragic. Each time he saw one of his warriors fall, his one eye gleamed with pain. Hodur fell, then Baldur, of those I knew by legend and name. Heimdal would blow his horn no longer, nor listen to the grasses grow. Tyr, with his mighty sword and matchless arm, stretched out with a last groan.

Ragnarok! Was it here, despite all I tried?

CHAPTER XI

The Fall of Asgard

SUDDENLY fresh forces joined us, from the castle. Frigga, Freya, Nanna, and the lesser women. Their womanly features were as grimly set as any man's. Or any Giant's. Even the sweet, lovely Iduna came pattering across Bifrost Bridge, swinging a sword. She fell almost at the first instant. Her golden voice, which Eve and I had heard in trilling song many mornings, would never again be heard, though it would echo down in legend into the next 20,000 years.

I told myself that, as I saw these magnificent people die. That though their bodies were destroyed, their memories would go on and on. I laughed bitterly at the Giants.

"Kill all you want!" I shouted at them. "You will be only a few fossil skulls in 20th century museums, in the next era. These people you destroy will live forever!"

No one understood, of all those around me.

Odin shouted an order, suddenly. Half the Asgardians had already fallen.

"Retreat to the castle! We will try to hold that against them!"

Covering their rear, the Asgardians streamed back across Bifrost Bridge. I remained, for I could not trust my heavy tread on the delicate structure. I faced the enemy alone. They came at me in phalanxes. I cut and pounded them to ribbons, in phalanxes.

But slowly, I began to weaken. Club-blows had landed, at times, jarring my internal mechanism. Here and there a cog was out of line, a gear-tooth missing, a muscle-cable slack. My battery was draining fast, with current pouring into my exertions.

Giants began to slip past me, onto

the bridge. Loki would take the castle first, and deal with me later, with his Thor-robot. Already he had had other catapults set up. Great boulders arced across the water and landed on Asgard's ramparts. Slowly the beautiful structure was crumbling. Odin and his last men would be defending little more than ruins.

And more Giants were slipping past me, keeping out of reach of my slowed arms and reflexes. The foremost were already reaching the island and castle, congregating there till they had enough of a force for invasion. They ran slowly, in single-file, across Bifrost Bridge. Loki had warned them it could not stand pounding.

Eve!

The thought of her struck like a blow. Eve was back in the castle, laboring frantically to repair the time-ship's controls. If they caught her before she finished, we would be marooned in this age!

I must give her time. Eve must escape, even if I didn't. She must return to the 20th century, and carry on our robot existence. And it might be the last hope of saving Asgard — if I brought the Rainbow Bridge down!

I LEAPED back, onto the bridge. It rocked and trembled at my machine-step. It would shake apart, collapse, before I had gone half-way. I would drop, with the ruins, into my grave of water.

But I suddenly leaped back to land. It might be done another way, without my death. In that I am human, too, not wishing death unless it is inescapable. Darting past the Giants, I ran along the bank. I took up a position a half-mile from the bridge-head, so that I could view its entire length. I swept my eyes along to where the key-arch held up the long suspended affair.

I had the sword in my hand. But I needed more weight. I took a heavy stone, and wired it to the sword-handle. The wire came from my chest-cavity, from the relay-coil of my left arm, leaving it dangling and useless. But I needed only one arm, now. I grasped what in effect was a heavy throwing hammer, and hurled it.

I had allowed for the wind. I had aimed with all the accuracy possible to my machine-brain. But I prayed as that hammer sailed toward the key-stone piece of the bridge. Prayed that I had not for once miscalculated, when so much was at stake.

The distance was close to a mile. Straight and true the hammer went. It struck, knocking out a strand of suspension-wire that linked to every other cable. Slowly, majestically the Rainbow Bridge sagged in the middle and collapsed. The sound that drifted back was almost a clinking sigh, as of an old and weary person lying down to rest at last. It could not have stood less than five thousand years.

The Bifrost Bridge, pathway of the gods, was gone! But the magnificent structure would live on in memory.

At least a thousand Giants went down with the bridge. The few who had reached the island were quickly being decimated by arrow fire from the castle. The attackers on the mainland were separated from their goal by a mile of water.

And now the time-ship rose from the castle courtyard. Eve had finished her repairs. I let out a jubilant shout.

Eve darted to me. "Asgard is saved!" I yelled. "In the time-ship, we can batter down their catapults, and drop masses of stone on the enemy, and rout them. Let's go—"

ASGARD was saved—or was it?

An ominous rumble sounded, al-

most as though the bridge were somehow falling again. But instead it was the castle walls falling.

And before our eyes, abruptly, the whole island sank!

The island had been a fault, a freak upthrust. The Glacier Age had left it untouched, but produced strains all around it, and under it. The crash of the Bifrost Bridge had touched off the stresses below, bringing about a minor geological upheaval.

Eve and I stared in dumbfoundment and sorrow. Asgard, home of the gods, was gone!

"In spite of what we tried," I said, "it happened. The Twilight of the Gods! Ragnarok! The last fading of a glorious age known to the 20th century only as a stirring fable."

I pointed to a boat that had miraculously righted, in the swirling area where the island had gone down. "Look, one soul escaped. Perhaps the mariner Njord. He will sail to a southern land, be befriended by humans, and spin tales that will go down from father to son into the far future. The last of the Norse Gods!"

The last! What about Loki—and Thor?

Rage swept over me. I swung the time-ship over the Giant army. They stood staring with wide eyes at the phenomenon they had just witnessed. Loki stood there, transfixed. He seemed almost pathetic, forlorn, with his former home vanished.

Landing, I jumped out, seizing him by the scruff of the neck.

"You destroyed Asgard!" I accused. "You brought Ragnarok!"

He looked at me with dumb, unutterable remorse. Rage left me. I released him. Child of two races, he was not to be blamed as much as pitied. Let him go, I told myself, to tell tales by firelight of lost Asgard.

"Why didn't you use the Thor-robot against me?" I asked in curiosity. "The being in the cave who alone could face me?"

Loki was puzzled, then half smiled.

"Thor-robot? It wasn't that. It was trickery too. Your opponent in wrestling was the thick tail of a dragon, kept in captivity in that cave. Any man would have been crushed when thrown by it." He looked at me in awe. "You held it down for a while!"

No Thor-robot, product of my imagination—but a dragon! A survivor of the dinosaur age, like the pterodactyl that had carried off Iduna. Only that one gigantic creature, in all creation, had more sheer power than a robot. Such had been the third trick of the tests.

As I turned back for the ship, shaking my head, I saw the army of Frost Giants turn away silently. They did not cheer. Perhaps even in their brute hearts the fall of beautiful Asgard struck a chord of remorse.

I SET our time-dial for the 20th century.

"There went the Norse Gods, into oblivion—but where was Thor? Where was the mighty, thundering warrior who played such a vital part in their doings? Eve, we've failed in our quest—"

Eve looked at me strangely. Her voice was tense.

"Think back once, Adam! In the legend, Iduna was rescued by an eagle —or *time-ship!*

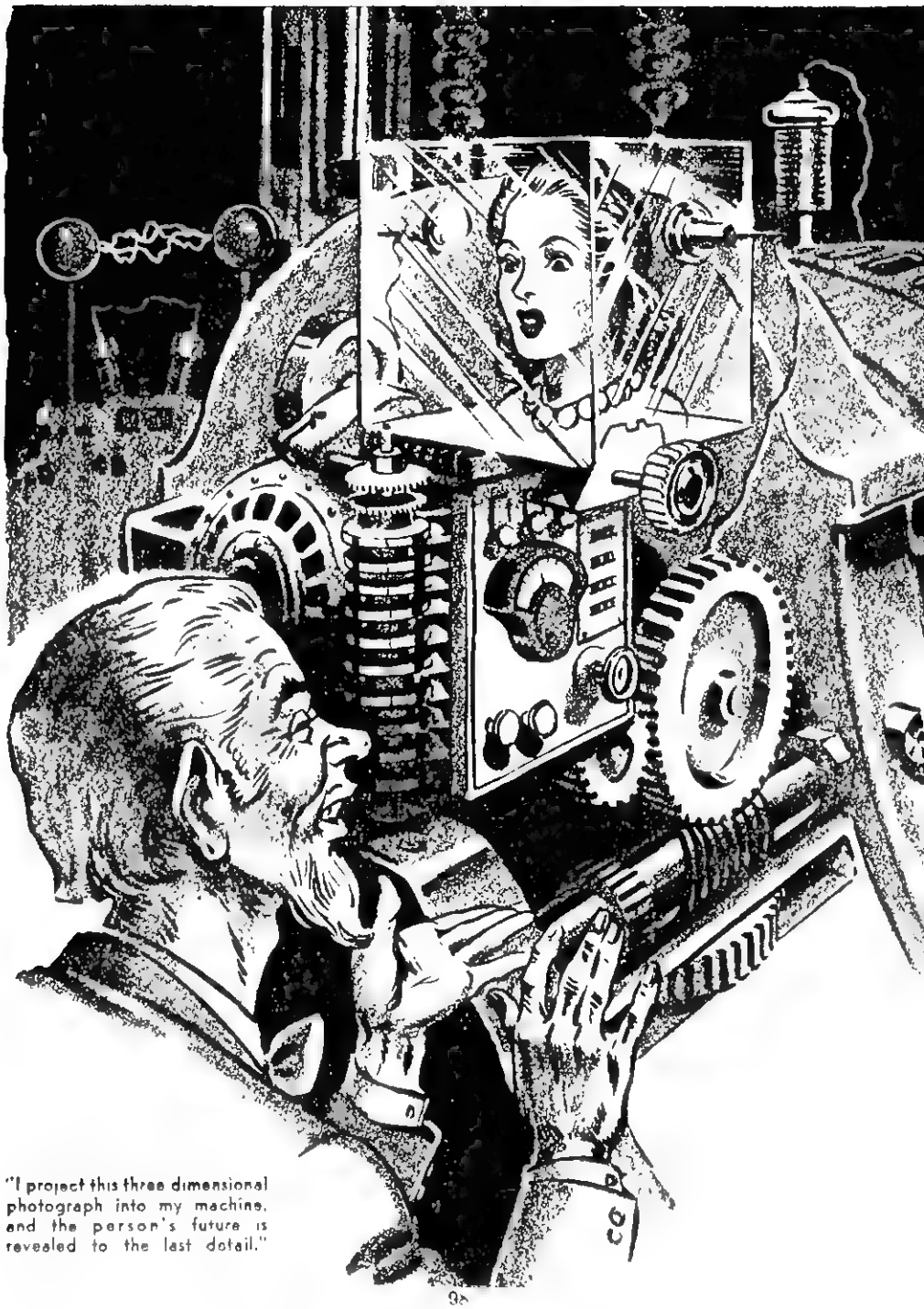
"Thor could not cross the Bifrost Bridge because he was too heavy—*like metal!*

"Loki cut off Sif's golden hair—or *detached her head!*

"Thor went disguised as a bride among the Frost Giants, and broke down their house while flashing thunder

(Concluded on page 119)

The ACCIDENTAL



"I project this three dimensional photograph into my machine, and the person's future is revealed to the last detail."

MURDERS by ROBERT MOORE WILLIAMS

What unknown threat lay behind Agar's calm mention of a broken shoestring? Could he really control the destiny of any person?

"NO!" my uncle thundered. "I won't pay you a hundred thousand dollars for these stocks. I won't even give you a plugged dime for them. They're not worth the paper they're printed on."

"You're mistaken there," Agar interrupted, his voice waspish with hate. "*To you,* these stocks are worth double the price I'm asking for them. And you'll damn soon find out what they're worth if you refuse to buy them."

Dan North, my uncle, was not a person to let any man talk to him the way this fellow Agar was doing.

"Get out of my office!" he snapped.

There was a moment of silence.

"All right," Agar answered. "If that's the way you want it, I'll get out of your office. But before I do, I want to tell you the story of a man who broke a shoe string while dressing in the morning. The broken shoe string delayed him and he missed the train he usually took to the city. He caught a later train, which was involved in an accident and he was killed. *Remember, North, for all you know, you may have a shoe string that is about to break.*"

"What the devil do you mean by that gibberish?" my uncle answered. "Are you trying to threaten me?"

"It is now exactly 2:18 P.M., Wednesday, October sixth, 1940," Agar

said. "At exactly 5:21 today you will have a clearer understanding of what I mean."

His voice had changed. He was no longer blustering. He was talking softly but there was ten times more threat in the suddenly assumed softness than there had been in all his bluff.

He walked to the door, paused with his hand on the knob. "Do you know a man by the name of Samuel Winters?" he asked.

"Yes, I know him," my uncle answered curtly. "What of it?"

"I tried to interest Winters in my proposition," Agar said. "He practically had me thrown out of his office, just as you have done. At 6:27 today you will probably understand not only why I have called his name to your attention but also why the stocks I have offered you are a bargain at twice the price I am asking for them."

With that, he was gone.

Martha and I came out of the adjoining office where we had been waiting. Martha Brandon was my uncle's secretary, and officially, I was his assistant. Really I was James Ellery, the sole heir to his millions. Just out of college, he was breaking me in to the world of business.

"Damned crank," my uncle was muttering as he came in. When he saw us, he roared at us to get back to work. His roar meant nothing. He was really very kind hearted but he had roared so long it had become a habit with him. He wasn't scared of cranks who threatened him with broken shoe strings.

Martha was.

"Jimmie," she whispered to me. "That Agar—Jimmie, he intends to harm Mr. North."

I THINK this was the first time she ever called me Jimmie during office hours. If I had had my way, there would have been no office in her life, but I did not always have my way with Martha. Nor with my uncle either.

"Oh, Agar is nothing but a crank," I answered.

That was what I thought, that Agar was only another crank. I wasn't scared. Nor was my uncle. All afternoon he gave no indication that he even remembered Agar's visit. But when we started to leave the office, after working a few minutes late, my uncle, after looking at his watch, suggested we walk down the stairs instead of using the elevator.

He started down the steps.

I saw him fall.

He either tripped on a loose strip of metal attached to the edge of the concrete treads or he missed a step completely. He was right in front of us. He tried to catch himself, failed, and fell completely down the flight of steps, striking with his arms out in front of him. There was a brittle *snap* as he hit the landing.

Martha and I rushed down to help him.

"What happened?" I gasped. "Are you badly hurt?"

"Don't try to lift me," he snapped. "No, I'm not badly hurt. Let go of my left arm."

I hastily released him and he got slowly to his feet, his face white with pain. Then I saw why he had told me to let go of his arm. His left arm hung limply at his side. It had been broken.

"Jimmie," he snapped to me. "What time it is?"

I gaped at him, wondering if the fall had jarred him out of his senses.

"Damn it, look at your watch!" he rasped.

"It's exactly five twenty-one," I stuttered, holding up my wrist watch.

Then I realized what I had said. Five twenty-one! The words sent a shiver-

ing chill through my body. *"At five twenty-one today you will have a clearer understanding of what I mean!"* Agar had said.

I was colder than I had ever been in all my life. An accident had occurred. Obviously it had been an accident. It couldn't have been anything else. But Agar had forecast that accident!

"Take me to the hospital," my uncle said grimly. "So I can get this bone set."

When I tried to question him, he shut up like a clam. He just wouldn't talk. But it was obvious that he was thinking of something else far more than he was of his broken arm.

I kept telling myself that Agar's forecasting that accident simply *had* to be coincidence. It couldn't be anything else.

HOURS later, after the bone was set and he was resting comfortably, Martha and I left the hospital. The newsboys were crying the early editions of the morning papers.

"Accident at Suburban Crossing!" they were yelling.

"Jimmie, did you hear that?" Martha gasped.

I bought a paper. It was there on the front page.

NOTED MANUFACTURER KILLED IN TRAIN CRASH

"Samuel Winters, 63, owner of a large manufacturing plant here, was instantly killed when the car he was driving was struck by a fast freight at a grade crossing. . . . The accident occurred at 6:27. . . ."

CHAPTER II

Death Strikes Again

"IT must have been a coincidence," my uncle said stubbornly. "I can conceive of no other explanation."

He was as stubborn about it as he had been about remaining in the hospital. He had stayed overnight. The next morning he had told the horrified doctors that he was not a charity patient and that he would leave when he damned well pleased. He telephoned me to come and pick him up. Now, his broken arm in a sling, he sat at his desk and glowered at Martha and me.

"Coincidence or no coincidence," I blazed at him. "Agar said something would happen to you at five twenty-one yesterday. It did. You fell and broke your arm. He said something would happen to Mr. Winters at six twenty-seven. It did—"

"But Agar didn't say I would fall and break my arm. He didn't say Sam Winters would be killed," he objected.

"Of course he didn't," I answered. "He's too smart to tell you that Winters was going to be killed because he wouldn't buy Agar's worthless stocks. If he had told you that, you could have gone to the police and had him arrested for attempted extortion, and possibly for murder. He said something would happen. Something damn well did. He expected you to put two and two together and realize that you are next on his list."

"But my fall was purely accidental," he answered. "And Winters' death was an accident. I checked with the police."

"I don't give a damn what you call it," I blazed. "Samuel Winters is dead!"

I was scared and I think he was too. But he wasn't prepared to admit it.

"What would you recommend I do?" he questioned, after hesitating. "Buy those worthless securities?"

"You might do worse," I answered.

"No!" he thundered. "That just shows your lack of experience. You

can't deal with extortionists by paying them off. They always come back for more. If I pay him off once, this fellow will bleed me for my last dollar. And remember my money will eventually be your money."

"I don't give two hoots in hell about the money," I answered. "It's your life I'm thinking about. If you won't pay him off, the next best thing is to get out of town. Stay away for several months. In the meantime I'll hire a private detective and find out what is back of Agar."

He hesitated, looked thoughtfully at me and at Martha.

"I think Jimmie is right, sir," she said impulsively.

His lips framed the word "Nonsense." But he didn't say it. The telephone rang. He picked up the receiver. I saw his face whiten as he listened. He didn't say a word to the person on the other end of the wire, just hung up when the conversation was over.

"Who was it?" I asked.

"Agar."

"Agar! What does he want now?"

"He doesn't want anything. He just said he had information that I was on the verge of making a very important decision. He strongly advised me to purchase his stocks *before I made this decision.*"

"Do you suppose," Martha whispered, "he knows that you are deciding whether or not to take a trip. Does he mean that decision?"

"He didn't say," my uncle answered. "But his call made up my mind for me. Now I am going to take a trip. James, call the airlines and make a reservation for me. I'm going to the west coast. Agar will have the devil of a time finding me there."

MARTHA and I took him to the airport. We kept a close lookout for Agar but he never showed up. Nor did we see anyone or anything that looked in the least suspicious. We put my uncle on the plane and returned to the office, where I started checking over the list of detective agencies in town.

"Anyhow he's safe," I told Martha over and over again.

"I hope he's safe, Jimmie," she answered.

"What do you mean?"

"I don't mean anything. But I have the most terrible feeling that Mr. North is not safe."

Less than an hour later a messenger entered with a telegram. I got a sick feeling in my stomach when I saw it. When I opened it, my stomach seemed to tie itself into a knot.

The telegram was from the airline. It read:

"REGRET ADVISE YOU DANIEL NORTH AMONG THOSE KILLED IN PLANE CRASH THIS MORNING."

My uncle was dead. He had died in a plane crash. An accident! I stared at the telegram, refusing to believe what was written there. The office was silent, horribly silent. In that silence I could hear a man breathing heavily. I was doing the breathing. My heart seemed to pound suddenly, once, and then race madly. Martha had read the wire over my shoulder. She caught hold of the desk to keep from falling.

I fumbled for a cigarette, drained smoke into my lungs, fought for control of myself. Who was Agar? Was he the devil himself. Had he reached out and waved his hand and had an airplane crashed from the sky? Had he been present in the stairway as an invisible force when my uncle tripped and broke his arm? Had he been guiding the car of Samuel Winters when it crashed into the train? Was he a fiend, a demon, a creature come up out

of some dark hell? Did death itself obey him? Who was this monster? What incredible power did he wield? Had Satan been released—

The office door creaked. I looked up.

Agar stood there, his jet eyes glinting.

He nodded toward the telegram in my hands.

"Ah," he said. "I see you have been informed, ah—of the accidental death of Mr. North. I appreciate that this is scarcely the time to take up such a matter, but perhaps *you,* as the heir of North's millions, will now be interested in purchasing certain stocks from me."

This devil had come here. Before the story could possibly have appeared in the papers, he knew my uncle had been killed. And he had come to me. I choked. Cold sweat was running down over my body.

"Of course," he said suavely, "I quite understand that you do not have control of North's fortune as yet, but I feel quite certain that a person who is to inherit millions would have no difficulty borrowing a mere two hundred thousands dollars to take advantage of the splendid opportunity I am offering—"

"Two hundred thousand!" I gasped.

"The price has gone up!" he snapped.

I WAS too dazed to say anything. All I could do was sit there and stare at the man. He stared back at me, distaste in his glinting eyes.

"You have a shoe string that is about to break, Mr. Ellery," he said.

Martha moved then, around the desk to stand beside me. I scarcely noticed that she had opened a drawer.

Agar said, "This young lady also has a shoe string that is about to break. Think that over, Mr. Ellery."

He had threatened me. Now he was threatening Martha, *threatening us with a broken shoe string!*

No court would interpret his statement as a threat, but I knew it was. Death was hidden behind that broken shoe string that Agar mentioned, inexplicible, incredible death.. Death looked out of Agar's black eyes.

As from a great distance, I heard Martha say, her voice hard and sharp. "Put up your hands, Mr. Agar."

My uncle had kept a pistol in his desk drawer. Martha had secured that pistol. She was pointing it straight at Agar.

"I'm not pretending," she said. "Either you put up your hands or I'll shoot!"

She was pretending, of course. She wouldn't shoot a defenseless man. But Agar didn't know that.

Martha's quick thinking had put him in our power. We had him! We could hold him long enough to find out what he was doing. Holding him was illegal, but to hell with the law.

Her finger tightened around the trigger.

Agar looked startled. He hadn't been expecting to find himself looking into the muzzle of a gun. It jarred him, upset him, for a second. Then he started laughing.

"I'm warning you I'll shoot!" Martha said.

Her threat only made him laugh harder.

"No, you won't," he said. "Or if you try, the gun will either be empty or you'll miss. One or the other. No, I'm sorry to disappoint you, but I'm in no danger. I looked before I left the laboratory and neither death nor a decision point that leads to a death path are ahead of me this morning. I'm careful that way, *very careful.* So you might as well put the gun down. I'm in no danger and I know it."

Martha tried to shoot. Her finger tightened around the trigger and lines of decision dug into her face. But she couldn't do it. She just couldn't shoot him. The muzzle of the gun wavered, then dropped.

"See, I told you I was in no danger," Agar jeered. "But if you want to be able to say the same for the both of you, I suggest that you give my proposition your very careful consideration."

With that he turned and walked out of the office.

He was no sooner gone than I grabbed the gun from Martha's trembling hand.

"W—What are you going to do, Jimmie?" she gasped.

"I'm going to follow that devil," I said. "I'm going to find out what's back of this."

Sticking the gun in my pocket, I dived out of the office.

CHAPTER III

The Secret of Death

THAT I was taking a hand in a game in which death held the stakes, I well knew. But I also knew I had to find out who Agar was and what incredible power he possessed. I didn't mind so much when he had threatened me, but when he had threatened Martha —He was striking at me through her. He had guessed or had known how I felt about her, and he was taking full advantage of that fact. And I could not protect her. I did not for an instant doubt that if Agar chose, she would die just as Samuel Winters had died, just as my uncle had died.

Keeping carefully out of sight, I followed him to a block of old, abandoned office buildings. He entered a narrow door opening flush on the sidewalk. When I tried to follow him, I found the door was locked. I went around to the back. There was a narrow, littered alley. The back door was locked.

I got in through the building next door, went to the roof, crossed over to the building Agar had entered, pried open a skylight, and dropped down into a dingy, dirty hall way on the third floor. The place was musty. The floor hadn't been swept in years and the windows were so dirty the light scarcely showed through. The building smelled or rats, and desolation, and death.

Where was Agar!

I looked in all the rooms on the third floor, my hand on the gun in my pocket. He wasn't there. I went down to the second floor. In the hall, the dust was thick. There were footprints in it. Agar had been there. The footprints led toward a room at the rear. Walking on tiptoes, I started down the hall.

I didn't hear the door open behind me. Suddenly something round and hard was thrust into the small of my back and a voice rasped in my ear.

"Get your hands up, Ellery!"

Agar's voice! He had come up behind me and had thrust a gun against my back. I raised my hands. I was caught! Caught like a fly in a trap.

He took the gun out of my pocket.

"You can turn around now," he said.

I turned. He had my gun in one hand. In the other hand he had a short length of copper tubing. It was this that he had held against my back. He hadn't had a gun.

"Guns are unpleasant things," he said. "They're messy, and inaccurate, and unscientific. I prefer not to use them unless I have to." He grinned in a way that made me want to retch. "There are other ways of accomplishing the same purpose, ways that leave no evidence behind them."

"Such as accidents!" I spat out.

"Naturally," he nodded.

His words sent a cold chill to the marrow of my bones. He had caused those accidents! He admitted it.

"Since you have called," he continued, "no doubt you will want to see my laboratory. I don't mind showing it to you. No doubt, after you have looked it over, you will fully appreciate that certain securities which I have for sale are a bargain at three hundred thousand dollars."

The price had gone up again.

THE lab was filled with a conglomeration of the weirdest instruments I have ever seen. But perhaps the weirdest of all were the photographs. He seemed to have hundreds of them, of himself, of me, of Martha, of my uncle, of Samuel Winters, of people whom I didn't recognize but who were caught in the net that this diabolical devil was weaving.

The pictures were on glass slides about six inches square. The material really wasn't glass. It was a clear, gelatin-like film, several inches thick. The images in the film seemed to be three-dimensional. They were perfect. The picture of my uncle seemed to be alive. It had been snapped in front of our office building and I am quite certain he had not known it was taken. Nor had any of the others known that their image was being caught in this inch-thick gelatin film. Agar had taken them secretly.

"The images are designed to fit into this projector," Agar explained. "Without going into technicalities which I am sure you would not understand, I might say that once I have a picture of an individual, that individual is completely in my power. Ah—you would no doubt like a demonstration. Which picture shall I choose? Shall it be, say —Ah, of course. You would like to see a projection of your picture."

I didn't want to see it, because I was already beginning to have horrible fears of how that device operated, but as long as he had my gun there wasn't anything I could do. Alternate waves of perspiration and of icy chills were sweeping over me. One second I was sweating. The next second, I was colder than ice.

There was a large screen in the back of the room. The projection was focused on that. I expected to see my own picture appear on the screen. But I was mistaken. Instead the screen showed a series of moving lines. Branching from a parent line, they spread out like the spokes of a wheel. Each spoke in turn branched into other lines.

The lines looked like tangled paths. Some of the paths were white. Others were red.

Agar explained to me the difference between the red and the white lines.

"There," he said, pointing to a spot where a red and a white path joined, "is a decision point. One path continues white. The other becomes red. The red path, you will note, rather abruptly disappears."

He chuckled horribly. Then he told me what the red path meant, and what the decision point meant. In that explanation I saw clearly why those accidents had not been accidents at all, why they had been premeditated murder instead.

If Agar had taken a gun and put a bullet through my uncle's head, he would not have been more guilty of murder than he was.

"I don't mind telling you this," he said. "Because, even if you should decide to go to the police with the information, I am afraid they would not believe you."

He was right about that. If I tried to tell this story to the police, it would

get me a bed in the psycopathic ward. Agar was beyond the law. He could commit murder and no jury in the land would ever find him guilty.

"So, Mr. Ellery," he said. "You see why my stocks are worth the price I am charging for them. Between us, of course, the stocks are worthless, and my sale of them to you is only a rather neat method of getting around the laws on extortion. But I am sure you understand why I have set such a high price on them."

I NODDED dazedly. I understood that point only too clearly. I was watching that red path on the screen. My picture was in the machine and that abruptly-ending red path meant that I—

Agar took my picture out and put his own image into the projector.

At the same time a red light on a switchboard in the corner winked on. Agar jumped when he saw it.

"Ah," he said. "So we have another visitor. Those photo-electric cells have come in handy today, very handy, indeed."

So that was how he had trapped me! I had crossed a beam of invisible light and a warning light had flashed here.

Keeping my pistol ready, he tip-toed to the door and listened.

I tensed myself. Whoever this unknown visitor was, if Agar permitted his attention to be distracted for an instant I intended to jump him.

He waited, then suddenly jerked the door open.

Martha almost fell into the room.

Martha! I had followed Agar and she had followed me. My heart leaped at the sight of her. It was a brave thing she had done, but she had only succeeded in putting herself into Agar's power. Now he had both of us.

He began to point the gun at her.

At the same instant I leaped toward him.

Out of the corner of his eye he must have seen me coming. He leaped backward and away, swinging the pistol toward me at the same time. Flame lanced from it. Powder stung my face, and the flash almost blinded me, but the bullet missed. It screamed past my shoulder and thudded into the wall behind. Before Agar could shoot again, I was on him.

I hit him harder than I ever hope to hit another man in all my life. Every ounce of strength that I possessed was behind the driving ball of my fist. If it had caught him flush on the point of the jaw, it would either have broken his neck or knocked him out cold. But it didn't land solidly. It landed on the side of his jaw, and glanced off.

He reeled backwards from the blow. Shaking his head to clear his vision, he was trying to bring the pistol up again. I grabbed his arm. He was as squirmy as an eel and as lithe as a cat. Writhing like a snake, scratching, clawing, butting, he fought me. How long we fought I do not know. It seemed to be hours. At the end I had the gun and was pointing it at him.

I had the gun. I had Agar. I had won this fight. If he made a move, I'd shoot him. Candidly, I was hoping he would resist. But he didn't. He just backed against the wall and began to laugh.

"Laugh while you can," I said. "We'll see how much laughing you can do after the police get hold of you. For that's where you're going—to the nearest police station. If you escape the electric chair, you'll spend the rest of your life in prison."

All I could think was that I had a gun covering him. I had him in my power. The police would be able to take over.

"Go on," he jeered. "Take me to the

police."

His manner jarred me. "That's exactly where you're going," I rasped.

"All right," he snapped. "I'm ready. But what are you going to tell them? Where is your evidence? Are you going to show them the equipment in this laboratory? You poor blundering fool! Don't you realize there aren't two other scientists on earth who could even begin to understand the way it operates? And you'll have to explain to the police how it works. You'll have to explain it to a jury. They will throw your evidence out of court and release me, *and then what will you do," Mr. Ellery?* You've seen the decision points ahead of you, Mr. Ellery. You've seen how many paths turn red and end abruptly. You've seen what I can do. How will you like life during the next year, not knowing from one hour to the next when death is coming, only knowing that it *is* coming? That's what it means to take me to the police, Ellery. How do you like it?"

He had me. He was right, damnably right about going to the police. They couldn't do a thing. He was above the law beyond it.

There was only one way to buy my own and Martha's life. For I knew, if I tried to pay him the blood money he demanded, he would take it, but he wouldn't release the awful power he had over me. He would come back for more money. Eventually it would be my life or his.

The only thing I could do to protect myself was to kill him—here and now. Shoot him, like the mad dog that he was. Shoot him down. Put a bullet through his brain.

I HEARD Martha catch her breath as she grasped what I was going to do. "No, Jimmie, not that," she begged. "He's got it coming."

"Please."

I honestly tried to shoot him. But I just couldn't do it. Even though my own life was forfeited if I didn't, I just couldn't shoot him down in cold blood. It wasn't in me. I think I could kill a man, if I had to, in self defense, but I couldn't put a bullet through Agar. I let the pistol muzzle drop.

He laughed at me.

I was whipped. I was a walking dead man.

Then, out of the corner of my eyes, I saw the screen. Hope leaped up in my heart.

"Agar!" I snapped. "Look at that screen. Your picture is in the projector."

Almost all the white lines on the screen were gone. A decision point had been reached, and passed. Only one main path led to the future, a red path. It ended abruptly.

Agar seemed paralyzed as he stared at it. Suddenly he screamed, a harsh, shrill sound alive with terror. He dashed toward the machine.

If he could get to that machine in time, determine another decision point, and from it plot another path, he would be safe. If he could get to the machine!

The gun jerked in my hand as I put bullet after bullet into the heart of the machine. His image in the gelatin film shuddered under a bullet. Another slug tore through a bank of vacuum tubes. Glass tinkled. Sparks flashed from suddenly broken circuits. Transformers throbbed under a sudden overload. The screen went blank.

"I couldn't shoot Agar. But I could sure as hell shoot the lights out of his machine.

His face went ashen white.

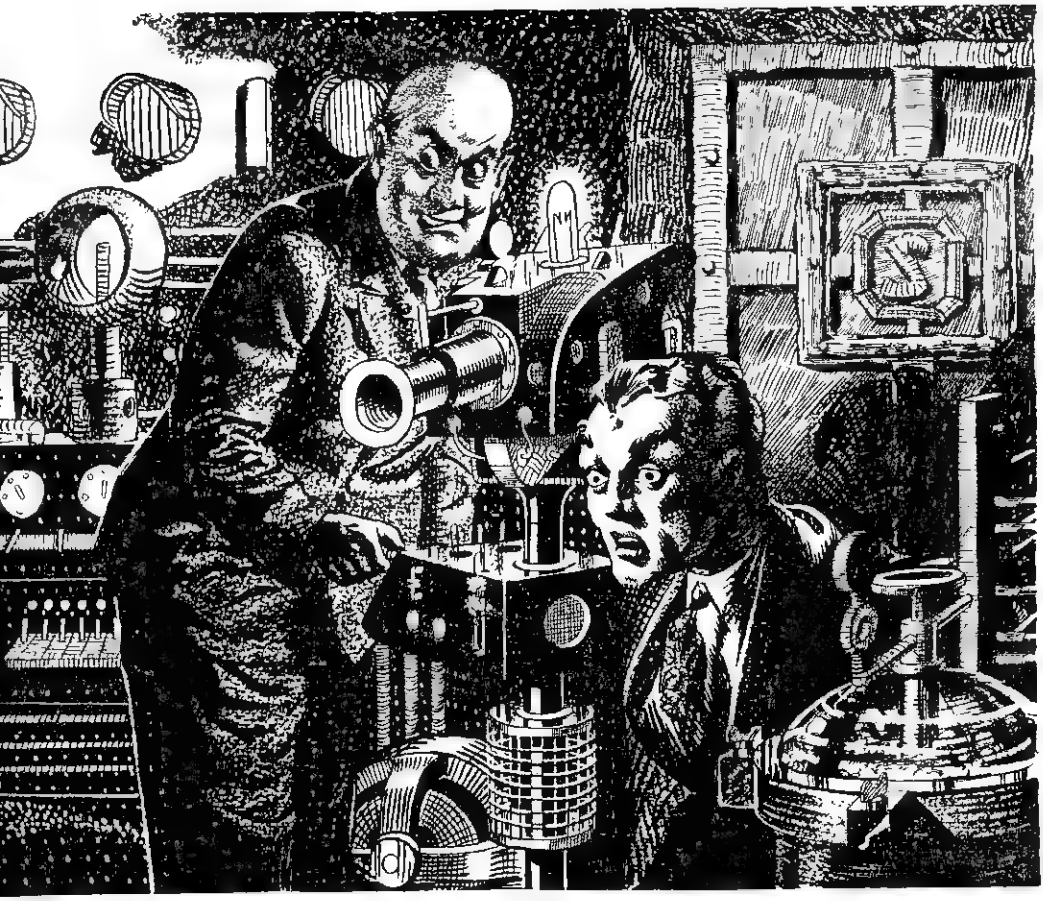
"Now laugh, damn you," I said. "How do you like it now when you're face to face with some of your own medicine?"

(Continued on page 139)

THE STILLWELL DEGRAVITATOR

"I have conquered gravity!" exulted Stillwell. But his exultance turned to despair in a very short time!

There before my astounded gaze, the rock floated from the table, drifted easily up to the ceiling



BY CHARLES R. TANNER

THE quiet which usually reigns over the main hall of the big library was suddenly broken by a crash, and the sound of falling books. A girl's scream followed immediately, and the scraping of chairs as startled readers leaped to their feet. I looked up from the article I had been reading, and was not surprised to find that my opinion of the cause of the accident was correct.

At the upper end of the hall, leaning over a fallen rack of books, with a pained and apologetic look on his face, was my friend Professor Isaac N Stillwell.

The professor's huge bulk (he is six feet tall and weighs over two hundred and ninety pounds) seemed even larger than usual today. He wore a light gray topcoat, and light colors always enhance a person's size; and this, combined with the fact that the little assistant librarian who stood looking woefully down at the fallen books was a small thin woman, made him seem almost globular. He had removed his hat, of course, and the light from the skylight above, striking his immense bald head, made it shine like the proverbial billiard ball, and added immeasurably to the effect of ponderous dignity. And that huge form was stooping, or attempting to stoop, to remedy the damage done.

I left my seat and hurried over to the scene of the accident. Though Stillwell is one of the most proper and dignified men I ever knew, there is about him a certain clumsiness that is cumulative, and when one accident occurs to him, it is better to check him at once or you will have half a dozen on your hands.

So I hurried over and tapped him on the shoulder and after a nod of recognition, I motioned him to one side. I assisted the little librarian to pick up and stack the books, and then turned to my friend. He broke into whispered thanks, but I silenced him and then made my way back to the table where I had been sitting. Stillwell followed and raised his heavy eyebrows in interest when he saw what I had been reading.

"'A Note on Further Aspects of the Universal Field Theory,' eh?" he whispered. "You know, Clement, I may have a few remarks to make on that subject myself, before long."

I noticed several of the readers about the table glance up with that peculiar look that people assume to emphasize annoyance. I made a gesture of silence and Stillwell, after giving a glance about, motioned me to follow him. I abandoned my magazine with a sigh of regret and arose. We left the library.

"Quite a coincidence, Clement, my boy," said the huge professor as we stepped outside. "I mean, finding you in there reading of Einstein's theory of a universal field. You see, I've been rather eager to demonstrate a little experiment I have been working on. Could you come down to the house for an hour or two?"

I SAW no reason why I couldn't. In fact, I am always eager to observe the experiments of my portly friend. Stillwell's intellect is as ponderous as his body, and his versatility is so great that there is hardly a science in the books that has not been assisted by his brilliant aid. Of course, there is a certain touch of uncertainty about him, due to that amazing clumsiness of his; but this really adds a certain tang to contact with him, and so I have never yet refused when chance offered to watch this genius work.

So now I led the way to my machine and we started off toward the professor's house, and the beginning of the strangest adventure that has yet befallen me.

For, once in the professor's home, we repaired at once to the laboratory in the basement. Here, in the middle of the floor, surrounded by a maze of bent and broken sections of pipe, yards upon yards of twisted wires and the remains of half a dozen big shattered vacuum tubes, stood an odd box-like apparatus, having at one end a long extending tube of metal like an old-fashioned blunderbuss. The blunderbuss pointed to a little table with a white enameled top, on which lay a group of crystals, among which I recognized quartz, beryl and almandite, as well as a huge stone.

"Now, Clement," began the professor, as soon as he had removed his hat and coat. "I can see that you are wondering and speculating already. So I'll get right to the point. As you doubtless know, modern theory considers gravity not as a force, but as a condition of space, a 'warp'* I believe it is popularly called, caused by the very presence of matter. Suppose there was some way of neutralizing—or rather, of heterodyning—the warping impulse. What would be the result?"

"Why—" I looked at him, incredulously. "Why, I suppose it would be

*All matter, even a single atom, warps the space surrounding it, to a certain extent. The resulting warp affects other matter so that its path of least resistance is no longer in a Euclidean straight line, but along a line that tends toward the warping body of matter.—Ed.

to neutralize, or even to reverse gravity. But surely it will be hundreds of years before science progresses sufficiently to enable it to do that."

"On the contrary, my dear Clement," the professor chuckled, heavily. "On the contrary, that is just what I have brought you here to see. I have devised a means to accomplish that phenomenom, and this is it, right here."

He moved over to the box-like apparatus and, ignoring my exclamations of wonder, he proceeded to adjust the various dials and switches which covered one side of it. Presently he removed the crystals from the table, all but the large boulder, and then he turned again to me.

"Now watch, my boy," he exclaimed. "You probably know that weight is a mere function of mass, do you not? Well, the recently discovered positron has, I believe you will recall, a *negative* mass. It weighs so much *less* than nothing! Using this as a base of my investigations, and remembering that the proton, which contains most of the *mass* of the atom, is like the positron, positive *electrically*, I have succeeded in inducing negative mass in the proton."

He made another adjustment or two on his machine and went on:

"This machine is the first one I designed, and so it is rather crude. It only works on close-packed solids, and is very hard to adjust. I have already worked out, in principle, a far simpler apparatus, that will work on anything. But this will do for a demonstration."

HE turned on a switch and I heard a whine from the box, followed by a deep sigh. I half expected some funny-colored ray to shoot out from the blunderbuss, but if a beam of force did shoot out, it was quite invisible. But the results most decidedly were not.

The piece of rock was a heavy thing and twice as big as my head, but almost immediately after the switch was turned on, it rose like a toy balloon and drifted to the ceiling; and there it stayed, bobbing about with every slight current, while I stared at it with open mouth and the professor rubbed his freckled, pudgy hands together and beamed.

At last I regained my voice and burst into frantic congratulations. "Professor," I cried, "this is the biggest thing you've ever done! Why, there's millions in this. The burdens of the world will be lifted from its shoulders. A hundred inventions will grow out of this one discovery! We can make anti-gravity machines and sell them by the million! This will be the biggest thing since the gasoline engine. It'll turn the world upside down!"

The professor beamed again. He caught a portion of my enthusiasm and patted his box affectionately. "This is only a very crude affair, Clement," he protested. "Just wait until I show you my perfected model. It will work on anything, not just boulders. And I think it will be far more compact, too."

"Well, we sat there in the lab for an hour or more, discussing the possibilities of the apparatus. The professor saw only the fact itself; he had made a machine that produced weightlessness, and that was that. But I am a reader of science fiction, and I have read a dozen times of the possibilities of anti-gravity; so I was able to point out any number of ways in which the principle could be applied. When I parted from the professor at last, we were both flooded with enthusiasm over what was to come.

CHAPTER II

Catastrophe!

FOR the following two weeks, I did my best to control my impatience while the professor worked on his im-

proved model. At last, early one summer evening, the long-expected call came and I hurried over to his house to inspect the finished invention. The professor met me at the door with an apologetic look on his face.

"I'm afraid I must postpone my demonstration, Clement," he said regretfully. "My very good friend, Dr. Hayland, has just called me and requested my presence at his home immediately."

"Hop in," I said, a little disappointed. "I'll drive you over to Hayland's and maybe you can complete your business and get back in time to show me your gadget, even yet."

Stillwell thanked me and squeezed himself into the car beside me, and we started on our way. We had gone but half a block, however, when there was a whishing sigh from the right front tire and I drew up to the curb and stopped, gritting my teeth to suppress an oath.

"Puncture!" I said wrathfully. "It would happen at a time like this. And— Oh, my gosh!"

"What's the matter?" Stillwell looked at me anxiously.

"My jack! I left it at home in the garage. Where in thunder can I get a jack around here?"

The professor was puzzled for a moment, then: "Clement, wait a moment till I run back home. I'll give you a demonstration of my perfected degravitator and supply a jack of sorts at the same time."

He squirmed out of the machine and waddled hastily up the street in the direction of his home. A minute or two and he appeared again, carrying a small object in his hand. When he reached the machine I saw, to my surprise, that the object resembled a rather complicated pistol.

"Here's the degravitator, Clement. What do you think of it, now?"

"You mean—" incredulously, "that that thing is the whole degravitator?"

"Quite so. The thing is not very complicated. You see, the real work is done by the atoms of the object degravitated. This is only used to initiate the action. Now watch how I utilize it as a jack."

He directed the "gun" on the front of my machine and squeezed a sort of trigger. As in the more complicated machine, there was no sign of a ray or other form of light, but the machine jumped back an inch or two, and then the front slowly rose an inch or so off the ground. Stillwell snapped off the force and turned to me.

"There now, I think you can fix your tire, eh?"

I nodded and got busy, and in no time the tire was changed and we were scrambling back into the car.

Now whether it was the novelty of the thing or the fact that we were in such a hurry, I do not know; but the fact remains that both Stillwell and I forgot that the front of the car had been rendered weightless until we had gotten into the car and I had started it. But then we were reminded of it, and in no uncertain way. No sooner had I started the thing than the front wheels leaped up like a bucking broncho, and the car dashed merrily down the street on its "hind legs." I grabbed frantically at the emergency brake and, out of a corner of my eye, I caught a wild glimpse of Stillwell's pudgy legs, as that adipose gentleman went head over heels into the back of the car. The brakes squeaked wildly, and the front of the car gently settled back to the ground.

Fluttery with excitement, I leaped out of the car and, jerking the rear door open, helped the professor out, not a little upset and bruised. He pulled himself together and, shaking his head dolefully, proceeded to neutralize the front of the car. Then we once more got

under way and at last reached Dr. Hayland's.

INASMUCH as I had no idea how long it would take Stillwell to complete his business with Hayland, I suggested that I wait awhile outside. Stillwell agreed and entered the house, and to my surprise, emerged again in less than a minute. His brow was black as he pushed his way into the machine beside me and: "That was somebody's idea of a joke," he snorted. "Hayland hasn't been in all evening. Some half-wit thought he was being funny. If there's anything I hate, Clement, it's misplaced 'humor.' Let's go home."

His irritation increased rather than diminished as we rode back to his house, for nothing could have ruffled his stupendous dignity more than to be the victim of a practical joke. By the time we reached his home, he was bordering on a case of "jitters."

"There'll be no use of my attempting to give you a demonstration tonight, Clement," he sputtered. "Suppose you just excuse me and come around tomorrow evening."

So, unable to do otherwise, I offered such sympathy as I could without further hurting his feelings, and leaving him, I drove off to my home.

I was quite convinced that I would see him no more that day and so you can imagine my surprise, when I drove up to my own house, some ten minutes later, to find my ward, Marjorie Barrett, and my housekeeper, Mrs. Potter, both awaiting me on the porch. They burst into excited cries when they beheld me.

"Professor Stillwell just called up—" began the Pest.

"And he wants you to come right over—" continued Mrs. Potter.

"He says it's terrible. Whatever *it* is," went on Marjorie.

"And he says under no circumstances bring the police," Mrs. Potter added.

"But he wants you to hurry, for he's in a very dangerous situation. And I'm going with you. Move over," and suiting the action to the word, the Pest seated herself beside me and slammed the door. We waved to Mrs. Potter, I spun the car around and we were off.

I quizzed Marjorie all during the ten minute ride back to the professor's house, but learned nothing save what she and the housekeeper had already told me. So it was with uncertainty and peculiar misgivings that I rang the bell at Stillwell's home and waited impatiently for an answer.

At the second ring, I thought I heard a muffled call from within. I looked questioningly at the Pest, but that young lady brushed etiquette aside by trying the doorknob and striding boldly into the house. I followed and was met by a call from the dining room.

"Clement!" came the familiar booming tones of Stillwell's voice. "Is that you? Come back, for heaven's sake!"

We rushed into the room and I gave a gasp of involuntary amazement. There was no sign of the professor. Then the Pest screamed and pointed to the ceiling. I glanced up, and my gasp was cut short half uttered, to be immediately succeeded by another and larger one. Bobbing about in the air currents occasioned by our entry into the room, like a toy balloon that had escaped from the hands of a child, and resting lightly against the ceiling, was the ponderous, the dignified Professor Isaac N. Stillwell!

CHAPTER III

The Pursuit of the Plunderer

"STILLWELL!" I cried, incredulously. "How—how did you get

up there? What in the world has happened?"

"I—I was held up. There was a robber here and I was held up."

The Pest looked at him and veiled her astonishment with sarcasm. "You're still being held up, if you ask me," she remarked drily.

"Please, my dear," groaned the professor. "This is a most ignoble position. Please remember this is no time for levity."

"Nor for levitation, either, for that matter," insisted the irresponsible one.

The combat between offended dignity and the realization of his dangerous position rendered the professor utterly speechless. He sputtered helplessly for a moment or two until I came to his rescue. I waved the Pest to silence and asked him, in as normal a tone as I could assume, just what had happened and what we could do about it.

"When you left me," the professor explained when at last he could speak again, "I entered the house and at once heard a noise, out here in the dining room. I hastened out, and there he was! It flashed instantly into my mind that that supposed call from Hayland was a hoax to get me out of the house while he pursued his depredations. With a presence of mind which I usually possess at such times, I immediately realized that, unarmed as I was, I was entirely at the mercy of this creature, and, casting about in my mind for some bit of strategy to deceive him, I thought of my degravitator. As you have noticed, its resemblance to a revolver is rather striking, and I depended on it to pass for one, at least until I could gain the upper hand.

"So I immediately drew it from my pocket and demanded that the criminal stand and surrender. His actions, however, were most unexpected. Instead of raising his hands in a gesture of surrender, as would have been the obvious thing to do, the incredible wretch threw himself upon me and seized my wrist.

"We struggled, and due to my unfortunate corpulence, I must admit that he had the advantage. In less than a minute he had twisted the degravitator from my hand and, directing it full upon my breast, he squeezed the trigger, closing his eyes as he did so, expecting, I suppose, the usual sharp report.

"There was no report, of course, so he immediately opened his eyes again, and by that time, the degravitating influence had acted upon me and, rendered weightless, I was ascending slowly to the ceiling. I was horrified, and the rise was accompanied by a most uncomfortable feeling of *falling;* but my horror, I believe, was nothing compared to that of the criminal.

"His eyes popped out, for a moment he seemed rooted to the spot, then he uttered a wild cry and fled out through the kitchen and the back door, frightened out of his wits! And here is the calamity, Clement — in his fright, he never thought of dropping the degravitator, he departed, carrying it with him!"

"The degravitator gone?" This was indeed a calamity. "But, Stillwell, how will you get down?"

"How will I get down, indeed!" cried the once-heavy professor in agony. "It would take me weeks to build another degravitator with which to neutralize my condition. And in the meantime, I should have to float around up here, listening to the crude puns and alleged humor of—of Miss Marjorie."

"Aw, now, professor, don't get up in the air over my remarks," begged the Pest. "I'll be good. Honest. I'll—I'll go out and find your de-what-you-may-call-it. Will that help?"

"That's it! That's it, Clement. That's just what you must do. Go out and

find it. Surely the criminal will leave some kind of trace. Please, my friends, say you'll do that."

I HASTENED to assure Stillwell that we would do our best, and Marjorie and I at once hastened out the back door into the yard behind the house. There we stopped, uncertain.

"Do you suppose we'll find any trace of him?" I asked, dubiously.

For once the Pest was serious. "I don't suppose we'll find the slightest sign of him," she admitted. "But I had to calm the poor old fellow somehow. He was getting all worked up and excited. Now he has hope, anyhow." She paused and broke into a chuckle. "He was always wanting to lose weight, wasn't he?" she laughed.

I frowned. I did not share her delight in poor puns and besides, the constant howling of a dog in the next door yard was beginning to get on my nerves. I had noted it, unconsciously, even before we left Stillwell's house, but now it was definitely forced upon my conscious mind. Darkness had fallen by this time, however, and it was impossible to see why the dog was howling. Then a sudden thought came into my mind.

"That dog!" I cried. "Listen!" I hastened over to the low wire fence that separated the two yards, vaulted over it and rushed in the direction of the howling. Sure enough! There, some eight or ten feet in the air, dangling by a chain that was fastened to the front of a dog house, and howling at the top of his voice, was an unfortunate brindle bull pup.

"Marjorie!" I called. "He's been this way," and as my eye lit upon an open gateway leading to an alley—"He went out this way."

Marjorie joined me in the alley and we looked around uncertainly. The alley ended blindly, further along in one direction, but in the other—

"Come on!" I shouted. "He must have run down to Blair Street. Maybe Marco, the fruit peddler, can tell us where he went."

Away we went down the alley, wildly enthused by the unexpected success of our chase. We could see lights in Marco Di Rosa's fruit store and knew that it was open. We felt sure that if our fugitive had passed that way, Marco would have noticed him. So we sped around the corner with hope in our hearts—and stopped with dismay in our faces.

For there was an awning hanging over the front of Di Rosa's little store and, hanging up in the awning was a huge heterogeneous collection of apples, peaches, cabbages, pineapples and watermelons, in the midst of which struggled futilely the little black-moustached figure of Marco!

"He's been here!" shouted the Pest. "Which way did he go, Marco?"

The little fellow rolled his eyes in her direction, eyes which were almost all white with fear and excitement, but he said never a word.

"Get him inside," I cried. "That's an old awning, and if it ever splits—" I said no more, but looked about for some means to reach the little man. My eye lit on a long pole like a clothes prop and seizing it, I instructed Marco to take hold of it, and so drew him down to where we could grasp him.

THEN we brought him into the store and let go of him, and he floated up to the ceiling. The Pest brought him a drink of water and presently his fright began to lessen. I asked him what had happened, but it was some little time before he could answer. Then:

"Look, Mr. Jordan," he stammered.

"I'm standin' by my fruit stand, see? Justa standin' there, wond'rin' is the Reds gonna win those pennant. An' aroun' that corner comes a man. Little fella, he's got a gun in he's hand. I'm scared, I make a jump for the door to go inside.

"But I guess that fella think I jump for him. Up come the gun, an' he's pull the trigger! Santa Maria—I'm scared then. I think—'Gooda-night, Marco, you're sunk now.' But no! Mister Jordan, I don't sink. I'm rise!

"Up I go into the awning, an' up go the apple, up go the peach and up go the cabbage an' the pineapple! An' that feller, he's look more scared than me. He scream an' close his eye—an' away he run!"

"Which way did he go, Marco? We've got to catch him, or you'll never get down again. Tell us which way he went."

Marco pointed down the street. "He's run down there. An' across the street an' around the corner into DeCourcey. I watch him, you bet."

Without more ado, the Pest and I were off. Down Blair, across the street and into DeCourcey Ave. And as Marco's little fruit store disappeared behind us, we looked down DeCourcey and beheld a most amazing sight. Some little way down the street, two gentlemen sat on the curbstone, two gentlemen clad most properly in full evening togs—white tie, tails, and all the trimmings. As we drew near them, we saw that they sat, not actually on the curbstone, but fully a foot above it, and even before we came up with them, we could hear them discussing the situation in loud but slightly befuddled tones.

"Your conclushions, my dear Dinwiddie, are almosht certainly erroneous," the nearest of them was saying. "I have not—have not been drinking to exshess. This is the firsht time I have been drunk since—since Thursday."

"Do not tell me I am wrong, Claypoole, my boy," answered the other. "I—I have been here before. I was in Doak's Sanitarium for two months, one time. Just you wait until the parade begins."

"Parade?" The first one was curious. "I was not under the impression there was to—to be a parade, Dinwiddie."

"There will be," announced Dinwiddie. "There will be elephants and reptiles. There are always elephants and reptiles. Pinks ones, p-probably."

"I am shtill unconvinced," insisted Claypoole. "I shtill claim that the fellow killed us. I f-feel like a dishembodied shpirit—and I am acting like a dishembodied shpirit. How else could I be sitting here on—*nothing?*"

WE had stopped before them, but they paid absolutely no attention to us, going right on with their amazing conversation. The Pest finally interrupted.

"Snap out of it!" she commanded sharply. "This is real. Where did the man go who shot at you?"

Dinwiddie raised a bleary eye. "Shpirit, begone!" he said loftily, and Claypoole, glancing up too, remarked complacently: "Now the animals will be coming."

Exasperated, and quick-tempered as usual, the Pest suddenly reached forward and gave Claypoole a resounding box on the ear. The result was surprising—the man bounded across the sidewalk, struck up against a building, rose some five feet into the air and slowly, slowly settled back to the sidewalk.

The Pest turned to Dinwiddie. "Come on, now! Which way did he go?"

A glimmer of sobriety flickered

through the fog that showed on Dinwiddie's face. "Down that alley," he gestured. "I—I— What's the matter with me?"

"You stay right here!" I commanded. "You and your friend will be in a pretty bad fix if we don't find that fellow." We dashed down the alley, and I shouted to the Pest as I did so:

"The degravitator is weakening. It couldn't raise those fellows more than a foot off the ground."

CHAPTER IV

Happy Ending

THE alley in which we found ourselves ran between a big warehouse on one side and the back end of a theater on the other. There were no doors facing the alley in either building, but beyond these a group of slovenly tenements had their rear entrances. We would probably have lost the trail right there had not an incident occurred that brought things to a climax. As we passed one of the tenements, a window crashed above us and an article hurtled to the ground, while the terrified scream of a man followed immediately after. The Pest hurried over to pick up the object—a little wooden box of cigarettes.

"I've seen this sort of cigarette before," announced the Pest, excitedly. "I knew a fellow once—" she paused and a disgusted look spread over her face— "They're marihuana."

"We haven't time for that now," I exclaimed. "Come on."

"Wait a minute. I've got a hunch." She started for the forbidding dirty entrance of the building, and I followed perforce, if only to protect her. Guided by the cries that still came from above, we forced our way past a slatternly and protesting landlady and dashed up rickety stairs and down a dark hall to the room from which the cries were coming.

We threw open the door—and there he was. We knew that he was the man we sought, at once, for he was hanging like grim death to the edge of a big oak table, his feet kicking wildly in the air above him, while one scream after another burst from his lips. And lying on the floor was an object that I immediately identified as the degravitator.

The man saw us and broke into a string of imprecations. "Can't I even die in peace?" he screamed, kicking his legs wildly. "Is everything always goin' against me? I'm nuts, and I can't even kill *myself,* let alone anybody else."

I moved over and recovered the degravitator, narrowly dodging a kick from the floating sinner. I swiped at him angrily, knocked him loose from his grip on the table and he slowly rose to the ceiling. He broke into renewed screams.

"Come on, Pest," I said. "Let's get back to the professor."

"Wait a minute," she demanded. "I want to find out something. What's happened, you? How did you get in this fix?"

The thief eyed her truculently for a moment, and then dropped his eyes, abashed. "I don't know what's wrong with me, lady," he said. "But I guess I got it comin' to me. A friend of mine gave me a pack of muggles ciggies. Said they'd give me nerve. I tried one tonight, just before I tried to raid an old gink's house up on Vance Street. It had the craziest effect. Every time I shot anybody, it looked like they just floated right up into the air. Started right off for heaven, without ever waiting to die. It scared me so it drove me about nuts. I come home as fast as I could, just about crazy. I guess I was

so scared I tried to bump myself off. I stuck that dam' gat to my head and pulled the trigger. Now look at me!"

"We can fix you up," announced the Pest. "But you'll have to come with us. Where can we get some twine?"

"There ought to be a ball of it in the left hand drawer of that chiffonier," the crook said, hopefully. "Do you really think you can fix me up?"

The Pest didn't answer, but went and got the twine. She tied it around his waist and started for the door, with the thief swinging along over her head.

"Take the rest of this twine, Clem," she directed. "We'll need it, before we get back to Stillwell's."

WELL, to make a long story short, some half an hour later we re-entered Stillwell's home, dragging along in the air behind us one thief, one fruit peddler, one badly scared and two arguing gentlemen in tails. Under Stillwell's direction, I recharged the degravitator, neutralized the entire group and brought them all once more back to normal weight. At once there ensued an argument as to the responsibility, which the Pest at last cut short.

"It's certainly not the fault of Marco or these two—er—gentlemen," she said. "And I don't see how any responsible person could blame this poor reefer," she indicated the thief. "And so, professor, it seems that in the last analysis, the blame must fall on you. Oh, I know what you're going to say," she went on as the professor raised his hand in protest. "It's a splendid invention and would lighten the cares and work of the world, I know. But it's not the sort of a thing that should be left lying around like an old pair of socks, where any ignoramus can pick it up and play with it. Put it away, and treat it like the laboratories treat radium, or dismantle it and forget it entirely until the world is more ready for it."

The huge professor smiled a little wanly. He was still shaken from his undignified sojourn on the ceiling.

"I think I shall forget it," he decided, meekly, as he tossed the degravitator into a desk drawer. "Yes, I really think I shall."

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ADAM LINK IN THE PAST

(Concluded from page 97)

and lightnings—or *electric sparks and an amplifying sound-box!*

"Thor half-emptied the drinking horn, lifted the Midgard Serpent, and fought Old Age, losing each time—or *drank poison unharmed, lifted a buried stone, and held a dinosaur's tail!*

"Thor was nearly drowned by the Giants, and hurled red-hot wedges back at them—or *red-hot stones!*

"And Thor hurled his hammer with such force that he split mountains—or *the Rainbow Bridge, at least!*

"Our names, too. They pronounced mine *'Eef'*—or *Sif!* And their word for metal is *'Thor.'* Don't you see, Adam—"

"Yes, I see," I said in a low, stunned voice. "I am Thor."

EPILOGUE

It is interesting to note how the legends of Thor seem to indicate that he might have been a robot. The following shortened excerpts are illuminating, in connection with the story. (Also see beginning of story, describing Thor in mythological terms.)

"Loki, the mischievous god, one day found Sif, the wife of Thor, sleeping and cut off her golden hair, as a prank. When Thor found Sif weeping, lightnings flashed from him (electric sparks from his joints!) and he pursued Loki. Frightened, Loki changed himself into a salmon and swam away. Pursuing in the shape of a sea-gull (or time-car!) Thor fished him up and made him restore Sif's hair (or head!)."

At the wedding feast Thrym had prepared, he asked: "Why are Freya's eyes so piercing?" (see story). When Thor found his hammer—"he rose at once. Lightnings flashed from his eyes. Peals of thunder shook the house. The winter giants fell to the floor. The walls of the house crumbled over them. Thor and Loki leaped into the iron chariot (!) and drove back to Asgard."

The beauty of Asgard, in legend, seems reminiscent of some form of magnificent architecture. "O beautiful Asgard with the dome above it of deepest blue, shaded by mountains and icebergs! Asgard with clouds around it heaped high like mountains of diamonds! Asgard with its Rainbow Bridge and its glittering gates! O beauteous Asgard, could it be that these Giants would one day overthrow you?"

Skyrmir, the Giant king, is quoted as saying, after the fabled three tests: "Thor is the mightiest being of all the beings we have known. All cheer for Thor, the strongest of all who guard Asgard."

When he went out against the Giants, Thor always girded on his "iron gloves," his "belt of strength," and "Mjolnar, his mighty hammer." A robot casting stones, swords, clubs, etc., as far as he could in battle (see story) might well be credited with his constant "hammer." Iron gloves and belt of strength are self-evident.

Bifrost Bridge broke under the weight of the riders of Jutenheim, at the Twilight of the Gods (see story). Loki led the legions of evil against fair Asgard.

Thor was once nearly drowned, crossing Ifling, the river between Asgard and Midgard, pursuing Giants. He caught hold of a little shrub on the bank and was saved. The Scandinavians still have an adage—"A shrub saved Thor." The Giants threw "red-hot wedges" at Thor, who "caught them in his iron gloves (!) and flung them back with such force that the Giants were destroyed." —*The Author.*

(Sources—"Old Norse Stories" by Sarah Bradish. "The Children of Odin" by Padriac Colum.)

CHINESE TELEPHONE

IN 1716 the Chinese mandarin, Cheng Lin, attempted long distance communication. Observing the sound magnifying qualities of the megaphone, Cheng Lin conceived a Chinese conception of the telephone. He had a rather largish megaphone erected on his estate. To the instrument's outer rim, where the diameter was about eighteen inches, the savant had his people attach long lengths of piping made of bamboo, bark and hide. The full length of this "wire" was about two hundred and sixty yards and Cheng Lin waited anxiously at the receiving end for the voice of his secretary whom he had instructed to shout some appropriate proverb or other into the megaphone's mouth. But all Cheng Lin heard was a booming, indistinguishable whisper.—*S. M. Ritter.*

The WINKING LIGHTS OF MARS

"It's war!" came a shout from the doorway

The linking of two worlds hinged on the result of the astronomers' observations. Would the Winking Lights be seen?

by GORDON A. GILES

"I'M sorry," said Dr. R. Westwood. "The board has decided it can't grant the million dollars necessary toward this project of sending a rocket to Mars."

He shoved the rolled blueprints across his desk at Thomas Ayre. Westwood hated to say it. Ayre had been so obviously hopeful and eager. His young face fell a mile now. The dream in his grey eyes faded, burst. It was as though he had tumbled and fallen from a great height—from the height of Mars in space.

"But I tell you it will work!" Ayre protested. He spread the blueprints and tapped the sketches for emphasis.

"The step-rocket principle. Each rocket-chamber, after discharging its fuel, drops away, lessening the weight. After ten stages, the final unit with its single passenger goes on and reaches Mars. This was all worked out years ago. And all the details of air, food and water supplies for the rider. The science of rocketry, which I represent, needs only money now to build and send a rocket ship to Mars."

His voice rose. "Good God, are you going to let a mere million dollars stand between you and the greatest thing in history?"

Dr. Westwood's voice was kindly, in answer.

"Very possibly it would work, Ayre. Our technical men found no glaring flaws in the scheme. But look. Our funds are limited. Wykoff Institute is supported by men who would tear their hair at money spent for what they'd consider a wild venture. We have to dole out our money for less fantastic research, such as cyclotron work, or electron-microscope pioneering. I'm sorry, Ayre."

He spread his hands eloquently.

"But you're my last hope!" the young rocket engineer said. He went on bitterly. "Financial interests weren't even polite, when I went to them."

Westwood leaned forward.

"I still don't understand one thing, Ayre. Why not build a stratosphere rocket first? Send it over the ocean? If it succeeded, you'd have business men paving a concrete road to your door. The first airplane flew just a few miles. To suddenly suggest jump-

ing right from Earth to Mars—I don't see it."

Tom Ayre's eyes went dreamy again.

"Because I believe there's life and civilization on Mars! The canals prove it."

Westwood laughed.

"But no one has proved the canals, first of all. Shiaparelli, Pickering, Lowell and all the others claimed to have seen them in their telescopes, yes. But only at the verge of human eyesight. It might be an optical illusion."

"It isn't!" Ayre snapped. "This year, early in 1940, Dr. Slipher of Lowell Observatory displayed 8,000 photographs of Mars, taken at its closest approach in '39. The photos definitely show the markings sketched by the earlier men from visual observation."

"Definitely?" Westwood shook his head. "Half the astronomers still consider the markings too hazy and uneven to be straight, artificial canals."

Ayre conceded the point.

"But there will be proof soon—unshakable proof. This is late 1940. Next month, the 200-inch telescope at Mt. Palomar will be ready for use. As soon as they swing it on Mars, the canals will stand out once and for all."

"Then wait that month or two," Westwood suggested a little impatiently. "If the canals are proved, you'll have a strong selling point. Wykoff Institute might back up the Mars rocket then—with possible Martian civilization the goal."

"ONE or two months," Ayre murmured, as if to himself. "It may be the margin—"

At the older man's curious stare, he went on. He leaned over the desk, eyes blazing.

"Do you know why I've been trying to push this thing through? Because the foundations of civilization, as we know it, are cracking. The war has been going on now for over a year. Most of Earth is involved except North and South America. When they get in—and it seems inevitable—the holocaust will go on for years—years!"

Westwood's face was heavy.

"Yes, Ayre," he agreed somberly. "Frankly, your rocket to Mars will have to wait till after the war—if anything's left."

Ayre's voice became fiercely eager. "But if the rocket reached Mars *before* the worst came—don't you see? Every paper and radio in America screeching the news. Life and Civilization on Mars, Our Sister World! The war would stop, once that stupendous news filtered through. The discovery of America forestalled a brewing war of that time."

"Only," Westwood said cynically, "to precipitate a death-struggle later between the Spanish and British Empires."

Again Ayre's eyes reflected a dream.

"But suppose," he whispered, "the Martian civilization is old and wise. Mars cooled before Earth; supported life sooner. Intelligent life must have risen there while we were still sub-men on Earth. The canals alone show a great science. With it, they must have a wisdom of time that young Earth hasn't had. Martian culture, long past the adolescent stage of warfare, would set an example to mankind on Earth. Perhaps their wisest administrators could come to Earth and pattern our society after theirs—united, peaceful, mellow with time—"

He stopped, flushing.

"I know it all sounds like wishful thinking. But it should be tried, on the one chance of saving humanity from its worst war in history. The Martian super-culture theory is a logical one—"

"Except for one thing," Westwood

interrupted. "Why haven't these alleged Martians visited Earth?" His tone became impersonal. "Despite such interesting speculations, I can't do a thing for you, Ayre. If the 200-inch telescope proves the canals of Mars, come back. We'll see what can be done then. Good day."

Outside, Ayre stalked the streets of Los Angeles with his blueprints rolled under his arm. He was still walking at dark. Mars glittered redly in the sky. It shafted through the mists of his dream mockingly.

The question rose puzzlingly in his mind. Yes, if Martian super-culture existed, why hadn't the Martians visited Earth?

"I'M sorry," said Petos Koll, Director of Research. "We have no funds to spare, for this project. A rocket to Darth, the third planet! It is a wild, fantastic venture to think of!"

Young Dal Hedar angered.

"Not so fantastic! You well know that plans for a step-rocket have long been suggested. Short-sighted transportation chiefs have simply refused to back it. I've come to you, for research funds, as a last resort."

"We have none to spare," Petos Koll repeated. "Especially now, during war time." The six fingers of his hands spread in a gesture of helplessness.

"That's just it—the war!" stormed Dal Hedar. "If a rocket reaches Darth from our planet, Mariz—"

"Why must you instantly rocket from one planet to another?" Petos Koll demanded. "Why not a stratosphere flight from one side of Mariz to another, first? Or at least to one of our two moons."

"Let me explain." Dal Hedar's young eyes filled with a somber light. "This present war promises to lay waste our civilization, as no previous one has. Dictator Sowll will not cease till he has gained control of every canal-center on Mariz. But suppose a rocket reaches Darth and finds life and civilization—"

"Life and civilization!" Petos Koll grunted scornfully. "You are one of those who believe the Winking Lights on Darth really exist? Most astronomical authority today states it is an optical illusion."

Dal Hedar's eyes suddenly grew dreamy.

He had once had the privilege of looking through the great telescope at the Singing Desert Observatory, famed for its excellent visual conditions. In its whirling mercury-bowl * reflector, the image of Darth had shimmered as a beautiful blue orb. A full night he had watched, and seen one hemisphere of Darth majestically rotate. The Darth day was almost exactly a Mariz day, though the Darth year was much shorter.

He had seen the famed Winking Lights.

Faint will-o-wisp star-dots that hovered at the verge of straining eyesight, so that one was never sure they were actually there. And there was no proof of them. A total of 28 had been reported, widely scattered over the dark portions of the planet, which composed one-fourth of its surface. The other three-fourths was known to be water. Oceans of it, as Mariz had once had in its far past.

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*A mercury-bowl reflector would be a telescopic mirror formed of liquid mercury, contained in a huge metal bowl, and rotated swiftly until a perfect concave surface was afforded, at the proper degree of curve to concentrate the light received through the barrel of the telescope. Naturally, such a telescope would be a tremendous machine, since Mercury weighs a great deal, and the mechanics of a rotator steady enough to provide an undistorted reflecting surface would be sensational. However, astronomers have dreamed of such a telescope and perhaps it will be a reality in the not too distant future.—Ed.

THE Winking Lights stood out best at half-phase of Darth. Then, here and there, they blinked into being, like tiny lamps. Those in the two land areas of the Western Hemisphere were most consistent. Three particularly bright ones always seemed to appear, so that even the die-hards could not quite deny their existence. One at the eastern coast of the northern area, at the edge of the Second Great Ocean. One inland, at the tip of the Five Small Seas. One on the western coast, further south, bordering the First Great Ocean. Like tiny flaming jewels they had appeared to Dal Hedar's wondering eyes. The lights winked, probably because of the interference of Darth's extensive atmosphere.

"Optical illusion?" snapped Dal Hedar. "I saw them myself. No, Petos Koll, they exist. They are the flaming lights of great Darth cities, built by intelligent beings!"

"Why have all those lights not been seen nightly for almost a year, in the Eastern Hemisphere of Darth?" argued Petos Koll. "Have those mythical cities of yours vanished, there?"

Dal Hedar shrugged his tall, bony frame.

"Perhaps adverse visual conditions. But the city-stars of the Western Hemisphere still shine nightly."

"There is no proof," grunted Petos Koll. "Photographs that purport to show the three brightest Winking Lights are not accepted officially. The light specks may be film imperfections."

Dal Hedar slowly shook his head.

"I wonder if on Darth, perhaps, their officials say the same of our canals—that they are an illusion . . ." His eyes glowed suddenly. "But there will be proof soon! Shortly the great new telescope will be finished, in the Rainbow Desert Observatory. With a mercury-bowl reflector twice as large as any in use, it will definitely reveal, once and for all, the Winking Lights!"

"You will have to wait till then for your funds," Petos Koll shrugged.

"But in the meantime the holocaust of war spreads over our world!" objected the younger Martian.

"Well, what good will the rocket to Darth do?"

Again Dal Hedar's eyes softened with a dreamy light.

"It will find there a great civilization. One that arose and reached its prime while we were still swamp-men. You have heard that theory, Petos Koll. That life arose on Darth *first*, because it is nearer the life-giving sun. Mariz had to wait till the lesser rays spawned single-celled life in our primordial ooze. Therefore, evolution produced intelligent life on Darth far before us. They must be a great and cultured race. Perhaps ages ago they passed through the stage of civilization where wars are fought. They live now as a peaceful, united, highly civilized society, with their great cities dotting all their lands as what we call Winking Lights."

His voice was eager.

"Don't you see, Petos Koll? Their wise men will come to Mariz and teach us the ways of peace and brotherhood. Wars will end forevermore on our bleeding world. We will no longer fight over the canals, which are the life-blood of our existence. Petos Koll, can you let a few radium coins stand between that and the downfall of our present civilization?"

Petos Koll sighed. He could not blame the young engineer for his visionary views. And there was just a chance that it would all happen that way.

"But," he mumbled, "there is war. My hands are tied. You will have to wait till the new telescope proves unquestionably the reality of the Winking Lights."

Dal Hedar left. So it had to be. In about sixty days, the new telescope would be turned on Darth. The Winking Lights would be proved or blasted, in sixty Mariz days, which were almost equal to sixty Darth days.

IN the visitor's room of Mt. Palomar Observatory, Tom Ayre waited nervously.

The mighty glass eye had been officially put into operation a week before. Previous to beginning its timed program of stellar observations, it was being swung from planet to planet, for tests of its powers.

The rings of Saturn had come out with stark clarity as composed of tiny pin-point bodies whirling around their primary. Another moon of Jupiter had been instantly spotted, the twelfth. The huge telescope was proving its tremendous powers already.

And today, Mars was on the calendar, for a night's observation. What would they announce about the canals, an enigma that had stirred fierce controversy for half a century? Illusion or not? Civilization or not? A dream in Ayre's mind come true, or—just a dream?

Ayre's mind drummed.

The canals had to exist! They must! On them rested the fate of humanity. The one chance to pull Earth's eyes away from its sordid doings and center them on the blinding revelation of another civilization. And a better one. Earth's warlords would dim and fade in that limelight, and all the nebulous, shoddy "causes" they held up would pass like black clouds.

Each man on Earth—French, German, British, Russian, Japanese—would suddenly draw closer to his "enemy." They were all human beings, in the last analysis. Out in space there, on Mars, were alien beings.

And they might attack!

Yes, it would work two ways, Ayre gloated. The first headline announcing a rocket to Mars and back would run over Earth like wildfire. The first thought would be—will our world be attacked by these super-beings on Mars? Here we are, bleeding, fighting ourselves to exhaustion. Tomorrow the Martians might come, conquering.

So would mass conjecture run, in this time of warlike thoughts and demoralization. As Orson Welles had unwittingly proved! Ayre smiled. And then how sublimely wonderful it would be when the Martians descended like gods from some Olympia! Wise, gentle, truly civilized beings who would overnight organize the anarchy of human life into a peaceful era.

Ayre jerked to awareness.

A man came in from the telescope chamber above. It was two o'clock A. M. They had trained their tube on Mars for several hours. His face was red with excitement. His voice cracked.

"Japanese bombers have just attacked Los Angeles!" he yelled. "The news just came over the radio." He gulped and went on, half with a groan. "America is in the war!"

THERE was a stunned silence in the room. The visiting astronomers looked at one another as though he had announced the universe splitting in half. Their scholarly faces recoiled from the dread pronouncement, so different from what they had expected. Not the canals of Mars, but war!

"America in the war!" one man murmured, closing his eyes to shut out a terrible vision. "The whole world is now at war. Two billion human souls!"

Ayre's mind shook itself, staggering. Was it too late? He ran forward and grasped the announcer's arm, who stood woodenly as if not knowing what to do

or say next.

"The canals of Mars?" Ayre demanded, shaking him. "What about the canals of Mars?"

"Canals of Mars?" The man looked at him stupidly, then waved a hand. "Oh, they exist. A webwork of them, clear as cracks in a mirror. Let me go! America is at war! The whole world is at war! Who cares about the canals of Mars?"

DAL HEDAR whipped his nine-foot angular frame back and forth in the antechamber of the Rainbow Desert's Observatory. The giant new mercury-bowl reflector had been sweeping the firmament for ten days.

Already memorable announcements had come. Polor's rings had come out with stark clarity as composed of tiny pin-point bodies whirling around their primary. Another moon of huge Kanto had been instantly spotted, the twelfth. And tonight, Darth was on the list for observation.

What would they announce about the Winking Lights, an enigma that had stirred fierce controversy for thirty years? Illusion or not? Civilization or not, on Darth? A dream in Dal Hedar's mind come true, or—just a dream?

Dal Hedar's mind hummed.

The Winking Lights had to exist! They must! On them hung the fate of his world. The one chance to shift Mariz's eyes away from its terrible civil war and center them on the blinding revelation of another civilization.

And a better one! Mariz's warlords would shrink to insignificance in that glory, and all the nebulous, twisted "causes" they held up would pass like winds in the Desert of Sighs. Each soldier on Mariz—Hokian, Pthuvian, Dorkite, Lansic—would suddenly draw closer to his "enemy." They were all fellow Marizians, in the last analysis. Out in space there, on Darth, were alien beings.

And they might attack!

Yes, it would work two ways, Dal Hedar gloated. The first sound-cast announcing a rocket to Darth and back would run over Mariz like a dust-cloud. The first thought would be—will our world be attacked by these super-beings on Darth? Here we are, drying away, fighting ourselves to exhaustion. Tomorrow the Darthians might come—conquering.

So would popular speculation run, in this time of warlike thoughts and hysteria. Dal Hedar smiled. And then how achingly glorious it would be when the Darthians descended like gods from the Spirit Dimension. Wise, learned, truly civilized beings who would overnight lead Mariz out of its chaos.

Dal Hedar jerked to awareness.

A staff-member came in from the telescope chamber above. It was late at night. They had been observing Darth for several hours, with the new giant mercury-bowl. His face was green with excitement. His voice was harsh.

"Hokian air-sleds have just attacked Canal Center Five! Kansa, our nation, is in the war! All Mariz is at war, now!"

Dal Hedar forged his way through stupefied astronomers to the man, grasping his arm.

"The Winking Lights of Darth!" he demanded, shaking him. "What about the Winking Lights?"

"Winking Lights of Darth?" The man looked at him woodenly, then waved an arm.

"Oh, they do not exist, after all. We observed for many hours, but not one was seen. Even the three brightest alleged to be in the Western Hemisphere aren't there. They have proved to be an utter illusion." He laughed wildly, and jerked away. "All Mariz is at

war! Who cares about the mythical Winking Lights of Darth?"

Dal Hedar stood stunned, broken.

Illusion, all illusion! There were no Winking Lights on Darth. No civilization, no cities, perhaps no life at all. The great new telescope could not be wrong. If it didn't show the Winking Lights, then they could not exist.

And there would be no rocket to Darth.

TOM AYRE stumbled, along with ten other drafted recruits, toward the barracks. The whole city was dark—blacked-out. Every city in Europe and Asia had been blacked-out for months, at night, in dread of the horrible air-raids that became the rule. Now every city in America too, would be kept snuffed like a useless candle.

They reached the barracks.

"Name?" asked the non-com checking them in.

"Tom Ayre. But listen, there are canals on Mars! Won't anybody listen? People up there, who'll save Earth. The canals are there. If you don't believe me, ask them at Mt. Palomar, where they have the big telescope—"

The officer interrupted, shaking his head a little at the young recruit's staring, haunted eyes.

"What are you raving about, son? The Mt. Palomar Observatory was bombed down the second night the Japs attacked. Now grab up that outfit and get going. There's a war to fight, mister, and it's going to be a long one."

« « ULTIMATE REALITY » »

THE nineteenth century sceptic who proudly proclaimed that he believed only in what he could see, hear, or handle amuses the educated man of today.

Whatever else we are doubtful about, we know that behind the world to which our senses react there is one infinitely greater of which we can learn only indirectly.

We know there are sounds too high in pitch for the human ear to hear, though certain insects have more sensitive organs. We are probably living in a babel of noise to which we are totally deaf.

So far as our senses are concerned, we remain serenely unaware of a raging magnetic storm which disrupts all electrical systems.

We are aware of colors ranging from violet at one end of the spectrum to red at the other. But we have found out that beyond the violet are other colors which we cannot see, though it is possible that some animals can. And below the red end is the infra-red, the "black light" with which astronomer-photographers are now doing miracles.

Dr. Otto Struve, director of the Yerkes Observatory, says of a new camera: "Used with infra-red plates sensitive to radiations intermediate between the reddest visible rays and heat rays, the camera has shown that the night sky is so constantly luminous in infra-red light that if human eyes were sensitive to these radiations they would see it as a luminous surface upon which the stars were relatively pale."

These infra-red photographs have revealed skies crowded with "ghost stars" the existence of which was not even suspected. Some of these dark, dead worlds are nearer to the earth than any stars were thought to be.

Mathematical physicists are no longer materialists in the old sense of the term when they try to explain the world of the atom in which apparently no such relationship as cause and effect exists.

Not long ago most psychologists regarded thought as the effect of a chemical reaction in the brain. Now many believe it is at least an arguable theory that the mind is a separate entity which uses the brain as a means of communication with the outer world. ESP—extra-sensory perception—is a recognized study in most colleges.

It is not heretical to regard time as an illusion.

No investigator of today claims any knowledge of ultimate reality. He knows that he cannot depend on his senses to tell him directly more than a small fraction of the truth.—*Morrison Colladay.*

ERROR CONTEST WINNERS

In our December issue, we featured a story by Milton Kaletsky, "The Planet of Errors," in which a series of deliberate errors were included. We asked our readers to pick 'em out, and offered cash prizes as a reward. Here are the winners of that contest:

FIRST PRIZE—$25.00

Albert F. Lopez, 24 Havre Street, East Boston, Mass.

SECOND PRIZE—$10.00

Leonard Marlow, 5809 Beechwood Avenue, Indianapolis, Ind.

THIRD PRIZE—$5.00

Arlo K. Richards, 710 S. St. Andrews Street, Los Angeles, Calif.

FOURTH PRIZE—$5.00

H. J. Rhodes, 1306 Orange Street, Berwick, Penna.

FIFTH PRIZE—$5.00

Paul Jepson, 802 South Fourth Street, Tucson, Ariz.

CONGRATULATIONS, you winners. You did a grand job of detective work, and you proved your science knowledge. Not only did you detect almost every error, but you detected from six to ten additional errors not even Mr. Kaletsky knew he was including!

Perhaps the most amazing fact of the contest is the name of the first prize winner. Mr Lopez, to the extreme astonishment of the contest editors, not only won first prize in this error contest, but is the very same man who won the identical first prize in our time-travel story contest in the May 1939 issue! In that contest, Mr. Lopez provided the cleverest ending for the unfinished story by Ralph Milne Farley, "The Time-Wise Guy." Mr. Lopez missed only *one* error, and he found *ten* additional errors not intended by Mr. Kaletsky.

Great credit also goes to Mr. Leonard Marlow, who detected all but two errors, and added eight new ones. Mr. Richards got third place because he found six new errors in addition to missing the same amount Mr. Marlow did.

Although all contestants listed from one to ten errors which were *not* errors, these were disregarded, and in no way detracted from the final scoring. Some of these "errors" were based on conditions in space not touched on by the author, such as provisions for moving about inside a weightless space ship, etc. But all in all, great cleverness was demonstrated by each entry.

Perhaps the most interesting feature of the contest was the proof, through discovery of *unintended* errors, that every science fiction writer has a tough row to hoe when he writes science fiction, and making mistakes is quite easy, when one does not know *every* fact ever discovered by science. Therefore, we can, in the future, easily forgive writers, who in seeking to entertain you, inadvertently demonstrate that they are not infallible by unsuspectingly violating some scientific precept.

But next time you criticize a story, dear readers, your editor is going to smile with secret amusement —because, so many, oh so many, of you, don't know thunder comes *after* lightning! But then it's the little things that trip us up, and it's the little things that cause our writers to make the errors you sometimes detect in their stories.

It was a grand contest, and grand fun for all. Especially for —THE EDITORS.

Meet the Authors

BACK about 1905, a little chap about nine was browsing among a pile of books and magazines which had been left by his recently deceased grandfather. There were Strand Magazines, and Cosmopolitans, and Argosies, and every one had some sort of science fiction story in it. There was "The First Men on the Moon," by H. G. Wells, "A Round Trip to the Year 2000," by William Wallace Cook; and I don't know how many others

All day long, that little chap lay on his belly, surrounded by magazines, and read, and marveled, and wondered. The next day, little Charley Tanner went to the library and looked and looked, and went home with a book called *Starland* by Robert Ball. Another science fiction fan was born.

CHARLES R. TANNER

From that day to this, I've read science-fiction wherever and whenever I've found it. First, I found it only in the old Munsey publications; then one day, in a drug store, I picked up a magazine called *The Electric Experimenter* in which there was a story called "The New Adventures of Baron Munchhausen" From then on, I was sold on *that* magazine

I started reading *All-Story* because it printed a story named "Under the Moons of Mars" by Norman Bean. Norman Bean is Edgar Rice Burroughs now, but I still read his Martian stories with interest, in fact, I just laid one down to write this article. I started reading *Cavalier* when it published "The Second Deluge" by Garrett P. Serviss. And I remember sitting on a dock in New York, waiting with my company to go to France, and reading the second part of "Palos of the Dog Star Pack," by J. U. Giesy.

Having made the world safe for Democracy, I returned home to find, during the next seven years, that science-fiction was all too scarce. And then came the day when I saw, with a delight that I can hardly express, that a new magazine was about to appear, a magazine devoted entirely to science-fiction! Only those old fans who have followed the course of this magazine from the beginning can imagine the impatience with which I awaited, and the thrill with which I read, that first copy, that April, 1926, edition of AMAZING STORIES.

In a few years there were two magazines—then three And one day one of the magazines offered a prize contest, and I won first prize! I was an author! I could *write!* I sat down and began to write anything and everything, in the firm belief that I was going to be rich in about three months. But alas, it didn't work out quite that way. I had concentrated so much on the reading of science-fiction that the only thing I could write really well was that form of story. So I began to specialize

Thus it came about that I wrote my most successful stories to date—"Tumithak of the Corridors" and its sequel I'm still proud of that story and of the fact that after eight years, the old readers of AMAZING STORIES still remember it and occasionally mention it in their letters.

But, beginning in 1933, a series of misfortunes too long to be recounted here made me abandon writing for several years Just when I believed that I was done for good, a letter came from AMAZING STORIES requesting a story for their first issue under the banner of Ziff-Davis Dubiously, and yet with hope in my heart, I wrote "The Vanishing Diamonds," in which I introduced a character which I still think is the best I've conceived, to date—Professor Isaac N. Stillwell.

Even the thrill of selling my first story was nothing to the thrill of the Chicago Convention. For the first time, I met fans that I had known of for years; for the first time, I met authors whom I had admired for ages; for the first time, I talked with the editor of my favorite magazine—and sold him a story!

And when it was all over, I went back to my home in Cincinnati, and sat down at my typewriter—and I've practically been there ever since. I hope this enthusiasm keeps up, for if it does, you'll be hearing from me again, I assure you.—*Charles R Tanner*

(Editor's note: You will find Mr Tanner's new story on page 108 We know you'll like it!)

QUESTIONS and ANSWERS

This department will be conducted each month as a source of information for our readers. Address your letters to Question and Answer Department, AMAZING STORIES, 608 S. Dearborn St., Chicago, Ill.

Q. *Do we know the real cause of cancer? Is it possible that cosmic rays have something to do with it?—Benjamin Roth, 1085 Simpson Street, Bronx, New York.*

A. As yet, we do not know the real cause of cancer, although it has been proven by experiment on rats, that irritation can cause cancer to become active. However, it is not conclusive that irritation is the cause, or just an agency that aids the growth of cancer.

Whether or not cosmic rays have anything to do with it is unfounded. We must say that although science fiction writers have given many powers to the cosmic ray, ranging from cancer malignancy, to evolution, none of that has ever been proved.

* * *

Q. *What is the heaviest known element? What is the specific gravity, mass, volume, and density of this element? Is there such an element as osmium. Where is it found? For what is it used? What is the volume, mass, density, and specific gravity?—Robert Keller, 87 Spring Street, Keyser, W. Virginia*

A. Uranium is the heaviest known element, with the exception of Neutronium, or star-metal, which is supposed to exist in certain stars. The atomic weight of Uranium is 238.17. Its density is similar to lead, its end product, which is 11.337. It occurs quite abundantly, existing with radium, in a proportion of 300,000,000 to one.

Yes, there is such an element as osmium. It is number 76 in the international table of atomic weights. Its density is 22.50, and its melting point is 2700°. It is a member of the platinum family of precious metals, and appears like gold. Its atomic weight is 190.9. It is a rather rare element, and has no commercial use, outside of the uses of all platinum metals, as a catalyst.

* * *

Q. *What is the deepest crater on the moon, and which is the largest?—Ambrose Marcellinus, 444 Fortieth Street, Millicent, Tenn.*

A. The deepest of the lunar craters is Newton, which is 24,000 feet in depth, or slightly over four-and-one-half miles deep However, its diameter of 140 miles does not make it the largest, since Grimaldi is 150 miles wide. Grimaldi, however, is only 4,000 feet deep.

* * *

Q. *What is the diameter of the red star, Antares?—Wilfred Dobratz, 568 McKedzie Boulevard, Wilton, Ohio*

A. Antares is a giant star, indeed. It is four hundred million miles in diameter, and would fill our solar system far beyond the orbit of Mars, from which its name "rival of Mars" is derived.

* * *

Q. *We've heard a lot about Archimedes and his famous lever to move the world. How long would that lever have to be, anyway?—Robert N. Quarry, Hillside, Babbittville, Oklahoma.*

A. Archimedes task of "lifting the Earth from its place" was greater than he thought. His lever would have to be 88,064,000,000,000,000,000 miles long, and to lift the Earth one inch, he would have to move his end 1,338,000,000,000,000,000 miles, which, at the speed of light, would take him 237,000 years, since the speed of light is 186,000 miles per second!

* * *

Q. *What was the Hindu concept of the Earth? —B. L. Manchester, Adams Falls, Vermont.*

A. The Hindus pictured the bottom of the universe as a sea of milk contained within the folds of a giant cobra. In this sea of milk swam a huge turtle. Upon its back stood four elephants representing the four cardinal points of the compass, North, South, East, and West. Upon their backs rested the flat Earth which gradually rises to high central mountains. Above the earth, as a huge candle, shines the flaming sun, while the topmost fold of the cobra forms the arching sky.

* * *

Q. *Who was Pythagoras?—Isaac N. Stillwell, Cincinnati, Ohio.*

A. Pythagoras was the first Greek to assume the title of philosopher, or "lover of wisdom." He lived from 580 to 500 B.C. He was one of the strangest figures in Greek history, and may be said to be the founder of mathematics, and to be the first to conceive the spherical form of the Earth and the planets. He first established a school at Samos, and then removed it to Crotona, in Italy. While his teachings are mystic and indefinite, they are of great importance to astronomy, for, as expounded by his followers, they spread far and wide, and lasted through twenty centuries of time to attract the attention of Copernicus, providing him with the incentive to construct the first true picture of the solar system. He believed that the sphere was the most beautiful of all solid figures. He taught that there were four elements: earth, water, air, and fire, and that numbers, like men, really existed. He believed the Earth to have life and intellect.

Science Quiz

The following quiz has been prepared as a pleasant means of testing your knowledge of things scientific and pseudo-scientific. We offer it solely for the pleasure it gives you and with the hope that it will provide you with many bits of information that will help you to enjoy the stories in this magazine. If you rate 50% correct in your answers, you are considerably ahead of the average. Give yourself 2½ points for each correct answer.

A GREAT MEN OF PHYSICS MATCH

Below are the names of 15 great men of Physics and their contributions to civilization. Can you match the men with their accomplishments?

1. Robert Boyle ( )
2. Antoine Henri Becquerel ( )
3. Michael Faraday ( )
4. Herman von Helmholtz ( )
5. Marie Sklodowska Curie ( )
6. Albert Einstein ( )
7. Joseph Henry ( )
8. Thomas Young ( )
9. Galileo Galilei ( )
10. Benjamin Franklin ( )
11. Wilhelm Konrad Roentgen ( )
12. Sir Isaac Newton ( )
13. Robert Bunsen ( )
14. Archimedes ( )
15. Lee de Forest ( )

A. Developed theory of Brownian movement; discovered photo-electric equation; formulated the Theory of Relativity.

B. Invented the electromagnet; built the first electric motor; experimented with self-induction.

C. Awarded Nobel Prize in physics; discovered X-rays.

D. Advanced the wave theory of light; showed that transverse waves explain polarization.

E. Author of three laws of motion which bear his name; author of the Law of Universal Gravitation; discovered the composition of white light.

F. Proved that the quality of tone depends upon the presence and relative intensity of the various overtones.

G. Research in radioactivity; first separated and isolated the element radium; discovered the element polonium.

H. Invented the audion bulb which made possible radio transmission and reception.

I. Discovered electromagnetic induction, which resulted in the development of the first electric generator; built the first dynamo; discovered the laws of electrolysis.

J. Discovered the laws of freely falling bodies, and laws of the pendulum. Made the first air thermometer and the first astronomical telescope.

K. Proved lightning and electricity were the same; invented the lightning rod.

L. Discovered the laws of the lever; discovered relationship between the buoyancy and displacement of fluids.

M. Discovered radioactivity.

N. Formulated the law which states that the volume of a gas at constant temperature varies inversely with the pressure exerted on it.

O. Invented a very popular type of burner; invented the spectroscope; invented the photometer.

CONFIRMATION TEST

Can you strike out the word that does not correspond in the series of words listed below?

1. Annular, nonpareil, corm, gemmule.
2. Clastic, erosion, helix, inlier.
3. Baboon, stencil, caribou, coyote.
4. Toltec, aztec, incas, quadric.
5. Adrenalin, niccolite, scheelite, rhodonite.
6. Anthracite, Anthracosis, black-damp, bioscope
7. Galvanometer, magnetometer, cathetometer, monochromator.
8. Maltase, trypsin, caisson, ptyalin.
9. Artichoke, asparagus, wye, brussels sprouts.
10. Chuck-walla, crocodile, diamond-back, iguana.
11. Sacrifice, strikeout, bunt, touchdown.
12. Barracks, aussie, buddy, jass-boes.
13. Africa, Europe, Australia, Jamaica.
14. Regulus, castor, pollux, alhena.
15. Baldpate, cormorant, heron, stamen.

THE KNOWLEDGE TEST

Can you select the ten correct combinations?

1. Chameleon—Reptile.
2. Gamma rays—Vacuum.
3. Hookes' law—Gravity.
4. Ohm—Electrical resistance.
5. Cathode—Negative electrode.
6. Lactic—Blood vessel.
7. Caligraph—Typewriter.
8. Libra—Zodiacal.
9. Laughing gas—Magnesium oxide.
10. Oil of Vitriol—Sulphuric acid.
11. Hertzian waves—typhoon.
12. Corona—Sun.
13. Celluloid—Hyatt.
14. QRM—Pressure.
15. North star—Polaris.
16. Canal—Moon.
17. Yeast—Microscopic fungus.

(Answers on page 142)

DISCUSSIONS

AMAZING STORIES will publish in each issue a selection of letters from readers. Everybody is welcome to contribute. Bouquets and brickbats will have an equal chance. Inter-reader correspondence and controversy will be encouraged through this department. Get in with the gang and have your say.

ALWAYS STICKS TO A.S.

Sirs:

Been reading AMAZING for quite a while, tried others but always stick to A.S Sure enjoyed meeting Hank Cleaver again. Although I don't like serials am enjoying "West Point 3000 A.D." Still can't understand the Martians being at West Point though. Let's have some more "time traveling stories" like "Rescue Into the Past." You're slipping on your covers. Better put Frank R. Paul on fronts. Don't you think you slipped on "The Day Time Stopped Moving"? Thought the choice of articles they used for the completing circuit would have burned if they could have gotten them into place, but how could they pick up the articles or separate them when they had piled them in the middle of the floor?

E. C. Clifford, Jr.,
3834 Gardner St.,
Berkley, Michigan.

The Martians were at West Point as students, to learn Earth war tactics. But unfortunately, they intended to put them to treacherous use. As for the use of the articles to form that circuit, we thought the author had explained how he got them and was able to move them.—Ed.

HE'S IN THE ARMY

Sirs:

Although this is the first time I have felt called upon to make any remarks, I wish both to praise and "dispraise" AMAZING STORIES, because I can remember back nearly fifteen years ago when I bought my first copy of AMAZING from a newsstand. Being in the Army, I have had no opportunity to save copies since that time, so my continuity has been, you might say, interrupted at various times

The first stories dealing with science fiction that I can remember were a series of tales of "The Flying Ring," I believe it was called. Then I followed avidly, when they were being published, the "Skylark of Space" series. When, or ever, will we have more of the Skylark and its crew?

In your October number, the stories I liked best were, in the order named: (1) Revolt on Io, (2) The Invisible World, (3) The Voyage that Lasted 600 Years. The latter seemed sort of outlandish, but a possibility, at that. (4) Raiders Out of Space, which I thought was a trifle impossible, besides being to my notion a whole lot incomplete. As for "Rescue Into the Past," the love-bug surely must have bitten Barney Baker hard, but it's love makes the world go round. Ralph Milne Farley must have felt his story was sort of incomplete, at that. It struck me that way. "The Day Time Stopped" has me pushed, complete, I pass.

In my estimation, I think if you'd publish more stories and ideas for space ships and space travel, why—who knows?—someone might build a space flyer before 1960.

Adam Link is always interesting and is sure to spring a new one on us, all of which makes for anticipatory reading pleasure.

Hoping, though, for more stories on the wonders of space travel, I remain,

Sgt. Aaron B. Lucas,
Battery D, P.C.A.D., 19th L.A.,
Fort Rosecrans, California.

Mr. Smith is thinking seriously of a new Skylark story, and we'll keep you posted on developments. We have hopes that it will soon be coming off his famous typewriter.—Ed.

SERIALS?

Sirs:

I have your November AMAZING STORIES before me and I'm disappointed. Not in the stories, they're always super, but why do you have to spoil an otherwise swell mag with a serial? I'm sure few of us would mind if you departed from your usual six-story-a-month policy, and gave us one long novel rather than to split it up into a serial.

Three cheers for *Fantastic Adventures*, too. Perhaps you'd be interested in knowing that I for one liked the old shape, but the new one seems larger.

When you run out of authors for your "Meet the Author" series, how about a similar one for artists? I'd like to hear the inside story on Paul, Krupa, and the others.

Sincerely,

Frank L. Lyman, Jr.,
Swarthmore College,
Swarthmore, Penna.

We are surprised to find that you object to two-part serials, which is as long as we run them. So far, our readers have enthusiastically welcomed them, since it gives the authors a real chance to turn out a meaty yarn. We'll give you the low-

down on artists, as well as authors. Julian Krupa was just recently presented.—Ed.

THE SAGE OF SALT CREEK

Sirs:

I'm one of those 200 letter-writers whose suggestions you have taken in reverse for so long, because you find that our suggestions are exactly contrary to the demands of the pulp field in general. I don't doubt that you are right, there, I don't read anything in the pulp field except in the s-f and fantasy fields, although I do read enormously large numbers of novels and non-fiction books

I've been a "fan" at least as long, and I think, considerably longer than you, but was usually a silent one until quite recently I think that the stories in your two mags are good stories, but darn poor science-fiction. I think Robert Moore Williams has written some splendid science-fiction stories, but *not* for AMAZING or *Fantastic Adventures*. I think the humorous stories in your two mags are among the best, and a distinct addition to s-f; but don't consider them an adequate substitute for more serious stories. I think you have improved AMAZING greatly. I think your editorial page is one of the best. I don't care much about departments, other than readers' letters, in your or any other magazines, generally, although there are a few exceptions, *very* few, to that. I liked the exceptional support you gave to the *Chicon*, even though I couldn't be there I like your generous use of advertising space in some of the better fanmags. I think you must be a swell guy.

But I *don't* like many of the stories you publish!

D. B. Thompson,
2302 U St,
Lincoln, Nebr.

I object. I've been a fan since 1924, when the first science fiction began to appear in the old Electrical Experimenter. Can you beat that? How do you class our stories as "Good Stories" and yet as "Poor Science Fiction"? Either a story is good or bad, no matter in what classification. Do you mean you don't like any of the stories we publish? Aw come now, D. B., you must like one occasionally. Fess up!—Ed.

CARRYING THE TORCH

Sirs:

I'm happy to see that you are carrying on the torch of the serial-lovers and only wish that you keep one constantly running—that would be six a year. Two definite policies you enforce concerning serials are most agreeable to me: only two installments and wise choices. Oh yes, a cover for at least one installment of the story. Every continued story so far has been above average, with the exceptional *Sons of the Deluge* and *Black World* the undisputed leaders of this group. Because of my rule of not reading serials till all installments are in my hands I cannot make any

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JANUARY ISSUE

Popular Photography

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comment this time: I will say, though, that it looks good and that the author is a favorite of mine.

You admit AMAZING should stress science and FA should do the same with fantasy—I'm hoping you do just that in the future. You've committed yourself—so look out.

I think it best just to ignore AMAZING Quarterly; I bought it just for the Krupa cover and to complete my files.

When will you use trimmed edges? All storekeepers put the trimmed books on top in this city and leave your two down at the bottom

Charles Hidley,
New York, New York.

Here's another opinion on serials, and apparently, all for us, on every point. Yes, we've committed ourselves, but don't worry, we have a definite line we hew by Oh yes, trimmed edges again. Well, now, let's not commit ourselves.—Ed.

THREE ISSUES AT ONCE

Sirs:

Have just finished thoroughly enjoying August, September, October issues of AMAZING STORIES. And this is a new experience. First time I've ever undertaken such a feat as writing a letter to a magazine.

But I want to appear experienced, so I'll lead this discussion with the topic of art work, just as all the other letters I've read do. The August cover rates first of the three magazines I'm writing about. Krupa and Morey ought to take away some kind of prize for their swell work

And the drawing inside your colorful covers, which first catches my eye, is also by Krupa. The one illustrating *Suicide Squadrons of Space.*

But then, enough for the artwork. It's the stories I really go for

And I guess I'll pick *Suicide Squadrons of Space* as my number one supreme for this issue. I was particularly delighted with it, as Dave Wright O'Brien is one of my favorites anyway.

Malcolm Jameson's done swell work in the past, but *Murder in the Time World* is one of his best. So, it cops second place for August.

And I enjoy Ed Hamilton tremendously. Thus *Lost Treasure of Mars* rates third.

"Hey!" you must be saying, "Where does Farley's masterpiece come in? It's darn good!" But not quite good enough for my critical eye. *The Living Mist* takes only fourth from me.

And now those well known brickbats fly! As a habit, I have learned to enjoy Don Wilcox, but *The Mystery of the Mind Machine* seemed, to be honest, rather corny. Maybe it was something I et, for *The Man Who Knew All the Answers* was too, too uninteresting and dumb. But it follows the fashion of Bern's other stuff. Damnably no good.

September's cover rates a pretty fair second And again the cover artist wins my laurels for the best inside picture. Fuqua's drawing for *Blitzkrieg—1950!* was tops.

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And for the September assortment of yarns I run into great difficulty. *Champlin Fights the Purple God; X-ray Murder;* and *Blitzkrieg—1950!* all get my vote for first place. All perfect!

But then *The Man Who Never Lived; The Synthetic Woman;* and *Fifth Column of Mars* are a different story. They all hit the bare bottom of the list. And I might as well tell you now, I am nursing a pet peeve against Mr. Robt. Moore Williams. His yarns irk me greatly.

Morey's October cover isn't so hot. And I didn't like the story which went with it. As for my favorite drawings inside, Hammond's for *The Invisible World,* and Krupa's for *Rescue Into the Past* are tied.

The Invisible World is unquestionably number one for October. Ed Earl Repp happens to be a standing favorite with me, also.

And Brad Buckner has a close second there with his original yarn, *The Day Time Stopped Moving.*

And good old Don Wilcox rates third, and no less, with *The Voyage That Lasted 600 Years.*

But now for those brickbats again. I suppose they go with every issue. But I can't help it! West's *Revolt on Io* was ROTTEN! I couldn't even bring myself to finish it! Ye Gods! I hope I don't see much more of him in AMAZING.

Well, aside from those brickbats, I'd say you have a pretty swell mag. And in spite of my bursts of indignation and disgust, I suppose I'll come home with an issue every month as usual—and enjoy it.

M. A. Chamberlin,
17641 Larchwood Ave.,
Cleveland, Ohio.

We hope you do exactly that, and we'll try to give you more of the kind of stories you praise so highly.—Ed.

RATINGS

Sirs:

This paragraph is to inform you that from now on any letters you receive from me will include my special system of ratings, which I "stole" from Harry Warner, Junior's excellent Fanmag, *Spaceways.* The address, for those interested is 303 Bryan Place, Hagerstown, Maryland, and anyone can receive a copy for only ten cents. Well, to get back to the rating system, which is one of the most simplest devised and easiest to use. Number ten for a story, article, etc., is the highest it can be given. Number one is the lowest score, with the numbers in between correspondingly denoting the worth of said story, article, etc.

"Raiders Out of Space" is the poorest story in the issue receiving a fair five. Fuqua's illustration gets a five.

Farley's "Rescue Into the Past," and Repp's "The Invisible World," each take a six.

Buckner's "The Day Time Stopped Moving" was a fairly good story of suspended time and is easily worth the seven it takes.

HOW STRONG IS THE JAPANESE AIR FORCE?

HOW many planes has the Japanese army and navy at their command? How does the quality of these ships compare with the planes of other major powers? What effect has the 3½-year bombardment of China had on Japan's air force? Do Japanese pilots understand the tactics of massed aerial warfare on the World War II model? Read Leonard Engel's timely and revealing article about the 1940 Japanese air force. It's exclusive in the big

JANUARY ISSUE

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A real good story, one of the best of the month stories, the kind you need more of, the kind I prefer above all, and the kind that will always take a nine, if not more, is none other than Don Wilcox's "The Voyage that Lasted 600 Years." It was by no means a perfect story, but it was good with a capital G, a capital O, another capital O, and a capital D. In other words, I liked it, and you get more like it from Wilcox and any other author. "Revolt on Io" receives an eight. Back cover: 9, front: 6. This issue was better than last. Keep on improving.

Rajocz,
312 East Elm Street,
Scranton, Pennsylvania.

Your method of rating is quite concise and clear. Thanks for giving us your opinion —Ed

MAYBE AIR WAS EXEMPT?

Sirs:

Poor little Harry Schmarje. Itsi bitsi Rollo didn't get his letters printed. What kind of fans has AMAZING got anyway? I don't get my letters printed either, but I'm not complaining.

Morey certainly does slap those lurid colors around. The best thing he can paint is space with nothing in it.

How did Dave Miller breathe in "The Day Time Stopped Moving"? How did he move through time-frozen air? How did he get from his kitchen to his drug store? I didn't understand that story.

"Raiders Out of Space" and "Revolt on Io" were good yarns, but "The Voyage That Lasted 600 Years" had them all beat. I like a really good story once in a while and I got it.

I demand a sequel to "Rescue Into the Past." That was the first really good time story I've seen in a long time.

The Scienticartoons are very good. Why don't you devote a whole page to them?

Jack Townsend,
Box 604,
Wilson, N. C.

Poor little Jack Townsend. He didn't get his letters printed either! Whatdya mean, Morey can paint space with nothing in it? We thought there was plenty in it. That air now We sorta worried about that too, but then why worry about air—unless you are suffocating?—Ed.

AIR RAID JOTTINGS

Sirs:

Just a post script to my recent letter. I had just posted that and got home again when an air-raid siren began blowing. We get these warnings about five times a day, but usually nothing happens. I was cutting down a camp-bed to make it fit inside my air-raid shelter, and I kept on with it I knew my wife and children would be safe, and so I was quite happy.

Twenty minutes later I heard the "Brr-brr-brr" of heavy German bombers, and went out to have a look The gardens of the houses were full of people staring up at the sky. When they passed

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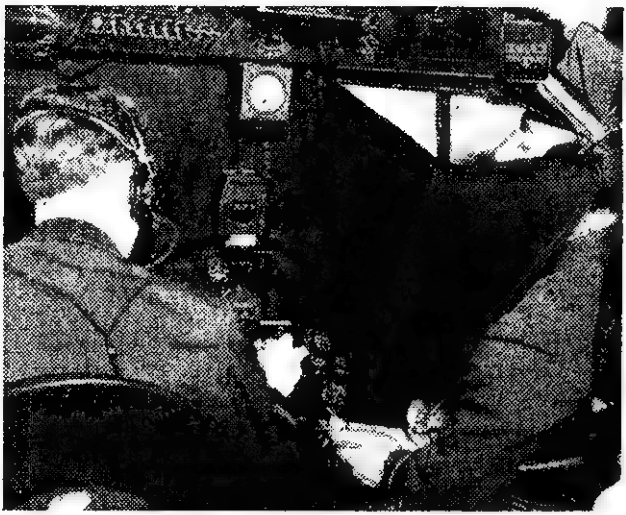

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through a break in the clouds we saw them, very high and small, six four-engined bombers. But the clouds spoiled vision, and I went indoors again. When the bombs fell I was hammering rivets, and heard nothing.

Nobody seems to worry much about Hitler's bombs, except to rush round to get the children in the shelters. But the interruption of sleep, work and meals is annoying.

Next day we had more excitement. I saw about ten airplanes attacking barrage balloons, and several balloons were brought down in flames. Ten minutes or so later I saw three more planes dodging about in all directions. I heard the familiar "rat-tat-tat" of machine-guns, and suddenly realized that one machine was a four-engined bomber and the other two were fighters They swerved and dodged all over the sky, gunfire sounding in short bursts at intervals, then I saw that the bomber was leaving a long trail of white smoke behind it. Soon after that it nose-dived. The fighters followed it down, then went away. A friend of mine saw the wreckage: it was a German bomber all right.

Not bad. Several balloons for one bomber was a bargain.

Next day was not so good. There was fighting high up in the sky, out of sight, then a British fighter came crashing down. We saw two tiny white parachutes coming slowly down, but a third did not open, and the man fell like a stone.

Since then there have been a lot of bombs, anti-aircraft fire and machine-guns, but nothing much worth reporting. While I was typing this a German bomber appeared suddenly between the clouds, and anti-aircraft guns began blazing away like numerous peals of thunder. I had to jump up and see the children to safety. It is the suddenness and unexpectedness of it that startles one.

Reading "Mirrors of Madness" by Don Wilcox, who constructs his stories so remarkably well, I was interrupted by bursts of machine-gun fire, and later by four or five heavy bombs bursting somewhere near. Nothing unusual in that, but I thought how strange it was that the hero of the story I was reading was supposed to be paralyzed with terror when his danger was hardly greater than mine. I wonder why science fiction authors fill their yarns with such cowards? If the authors were in real danger, they would face it just as calmly as I and my neighbors were doing at that moment, and not in the craven fashion of their own creations.

I think Hitler will try to invade us soon. He says now that he won't, and he always does the opposite of what he says he'll do, so as to take people by surprise.

August 21, 1940,
London, England.

This letter, received from a person we will not name, gives a graphic story of the air-raids in London. How prophetic this writer was, concerning Hitler's invasion attempt, is interesting. Hitler did attempt an invasion on September 16, and lost heavily. It is interesting to note that Londoners

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are taking it so calmly, and have so clear a picture of what is going on, and of what to expect.

As for Don Wilcox, take a tip from this writer. He might have something there!—Ed.

SWELL COVER

Sirs:

The cover of the January issue was swell, the John Carter story was pretty good too. I think that Mystery Moon was the best story in the mag. That yarn by Wilcox was pretty swell.

In the Dec. issue the Adam Link story was good. When is the next one coming?

Some of the good stories in other issues are, "Liners of Space," "The Synthetic Woman," and "Hell Ship of Space."

Paul's back covers are swell. That City on Venus was his best. I am thirteen and hope you print my letter.

Robert Haseltine,
105 South Main St.,
Elroy, Wisconsin.

A BURROUGHS FAN

Sirs:

I'm a Burroughs fan, and naturally took great interest when I read December that JOHN CARTER would appear in the next issue. So when the issue hit the stands this month, I was among the first to grab it and read Burroughs' yarn. What I think of it? I liked it. It was swell except that it was a little too short. Outside of that it was a "honey." One of the best things about publishing that yarn was the fact that J. ALLEN ST JOHN did the cover and interior illustrations, they made you feel right at home while reading the story. The cover is the best you've had since Ziff-Davis took over. I'm glad to see that more of Burroughs' yarns are coming in future issues Get all of Burroughs' famous characters and you'll have a great magazine.

John V. Taurasi,
137-07 32 Ave.,
Flushing, New York.

"INDIGNANT"

Sirs:

I have just finished reading the January edition of AMAZING STORIES and I must admit it's pretty good. "John Carter and the Giant of Mars" was superb. "Mystery Moon" and "The Invisible Wheel of Death" ranked second with the short stories about even.

In my last letter entitled "Criticism" just why did you distort my P.S.? I wrote "I am thirteen yrs. old and am writing for the first time to any magazine." I did not write "I am thirteen years old, and that probably explains why mistakes in everything have occurred." It's all right to change things around but that's going too far. If this letter is printed you can head it indignant.

Morton S. Handler,
3537 W. Ainslie St.,
Chicago, Illinois.

We're sorry your letter was misquoted. Some-

times these things happen, and even astute proofreaders like myself (?) fail to catch them. Typesetters sometimes do funny things, or should we look for another alibi? Are we pardoned?—Ed.

THE END

THE ACCIDENTAL MURDERS

(Continued from page 107)

He screamed and started toward me. Simultaneously a shrill whistle echoed through the building and heavy feet pounded on the stairs outside the room.

"It's the police," Martha whispered. "I called them before I came in. They've finally arrived."

Agar seemed to lose his head completely. He forgot all about me. He darted out the door. There was a scuffling sound outside and then a harsh voice ordered. "Grab him down below, boys."

Agar had gotten past the officers on the stairs. I leaped to the window and jerked it open just in time to see him run out of the building. He had escaped the police on the sidewalk.

I saw him dart across the street. A streetcar was coming from the north. A truck was coming from the east on a side street. Agar ran into the middle of the intersection.

I pulled Martha away from the window so she wouldn't see what was going to happen.

BEFORE the police came in, I tried to explain to Martha what Agar had done. The man must have been a brilliant scientist. He had discovered a method of foreseeing the future. Not the future in general but the future of any given individual. And he had also discovered that the future is not fixed. Definitely it is not. Since the dawn of history men have sensed that this is true. The future of an individual is subject to change. There are varying paths he may take in life. One path

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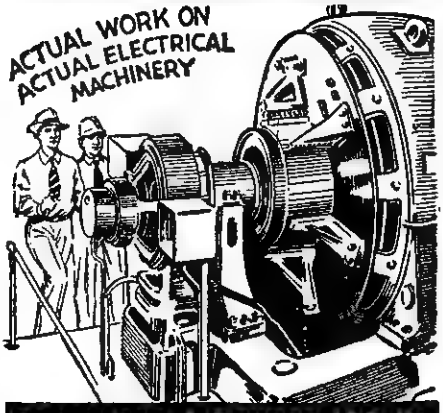

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32x6.00-20		3.15	1.65	7.00-20	5.45	2.95
33x6.00-21		3.40	1.65	7.50-20	6.25	3.75
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leads to wealth, success, happiness. One path leads to bad luck and failure. No man knows what path he is on, whether he is moving toward success or toward failure, toward life or toward death. But Agar had discovered a method of seeing into the future. He needed a picture of the individual in whom he was interested. Then his instruments showed him the possible future paths of that individual. The white lines on his screen meant paths that led to life. The red lines were paths that ended, abruptly, in death.

Each individual, at countless times during his life, has to make decisions. These decisions will lead him to life or death, he doesn't know which. He may make the decisions without knowing he has done it. The decisions may seemingly be of no importance—the broken shoe string that causes a man to take a later train on which he is killed.

Agar could, by his instruments, foresee those decision points. He could tell whether a man was on a life path or a death path. And he could, at the decision points, nudge an individual from a life path to a path that led to death. A telephone call might do it. A stranger stopping you on the street to borrow a match might be Agar nudging a victim over on a death path. It might be anything.

He had nudged Winters on a death path when Winters had refused to pay off. He had done the same thing to my uncle. Both men had died in accidents, but Agar, by indirectly putting those men on paths that led inevitably to death by accident, had murdered them. It was as simple—and as devilishly complicated and ingenuous—as that.

Meanwhile he was safe. The law couldn't touch him. And by paying attention to his own decision points as shown on the screen, he could always keep on a life path himself.

Martha's entrance into the laboratory must have been the decision point where he was nudged from a life path to a death path. Before she had entered, his picture had been in the instruments and the screen had showed alternate life and death paths ahead of him. But the instant she entered, he was forced to make a decision. He made it. The instant he had made it, the screen showed a red path ending abruptly. Even when he forced himself past the police, he must have known the ending was a foregone conclusion. His machine smashed, he couldn't discover another decision point that would lead to a life path.

He raced across the intersection. The street car bell clanged. He dodged out of the way—and ran directly in front of the truck. He screamed when the truck hit, screamed once. The scream was choked into silence as the heavy wheels of the truck went over him.

The police reported his death as an "unavoidable accident."

CORRESPONDENCE CORNER

Harry Schmarje, 318 Stewart Rd., Muscatine, Ia., wants pen pals, either sex, ages 14 to 16. . . . Al Narkis, 4353 S. Talman Ave., Chicago, Ill., would like to correspond with young ladies between 15 and 18 who are interested in sports, photography, science, collecting stamps, and drawing; will answer promptly. . . . Katherine Baum, 1243 Juniata St., N.S. Pittsburgh, Pa., has for sale rare issues of magazines which will go to the highest bidder. . . . J. A. Morton, 20 Done St., Arncliffe, Sydney, Australia, wishes to contact pen pals in the United States or Canada; 14 yrs. of age, and interested in things concerning the universe. . . . Eva Schaeffer, 2208 Nueces St., Austin, Tex., a freshman at the University of Texas, would like to hear from science fiction fans at the university, especially girls. . . . Chester Hoey, 301—6th Ave., Brooklyn, N. Y., would like to correspond with girls around 25 yrs. of age. . . . Hannah Bryant, 27 Elizabeth St., Redfern, Sydney, N.S.W., Australia, wants correspondents, any age, in any part of the world. . . . Iris M. Usher, Benarkin, B.U. Line, Queensland, Australia, 26 yrs. of age, would like long friendly letters from anyone, any age, in the United States or Canada; interested in sports, gardening, exchanging snap-

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shots. . . . Harry Jenkins, 2409 Santee Ave., Columbia, S. C., 16 yrs. of age, wants correspondents between 15 and 20; all letters will be answered immediately. . . . Morton Kaye, 1217 Higa Terrace, Union, N. J., wishes to get in touch with science fiction and AMAZING STORIES readers in Union; telepone Un. 2-4097. . . . M. Korshak, 5555 Hyde Park Blvd, Chicago, Ill., wishes all those interested to send their name and address for a free copy of a science fiction catalogue. . . . Philip Tobenkin, 3348 Kempton Ave., Oakland, Calif., has for sale a fine collection of science fiction magazines which will go to the highest bidder. . . . Jack Downes, "Woodlands", Broula; Via Cowra, New South Wales, Australia, would like pen pals who are interested in exchanging stamps and magazines; guarantees a reply to each letter. . . . Brune DeRochi, 3627 Virginia, St. Louis, Mo., is desirous of receiving instructions and data to build a telescope . . . N. G. Martin, 1110 Highland Ave., Briston, Va., will sell many second-hand science fiction and other magazines for 5c each; state copies desired. . . . N. Goring, Chatham Heights, Fredericksburg, Va., would like to correspond with pen pals in Cluna, Alaska and Canada, and collect oddities and coins. . . .

QUIZ ANSWERS

(Quiz on page 131)

A GREAT MEN OF PHYSICS MATCH

1A, 2M, 3I, 4F, 5G, 6A, 7B, 8D, 9J, 10K, 11C, 12E, 13O, 14L, 15H.

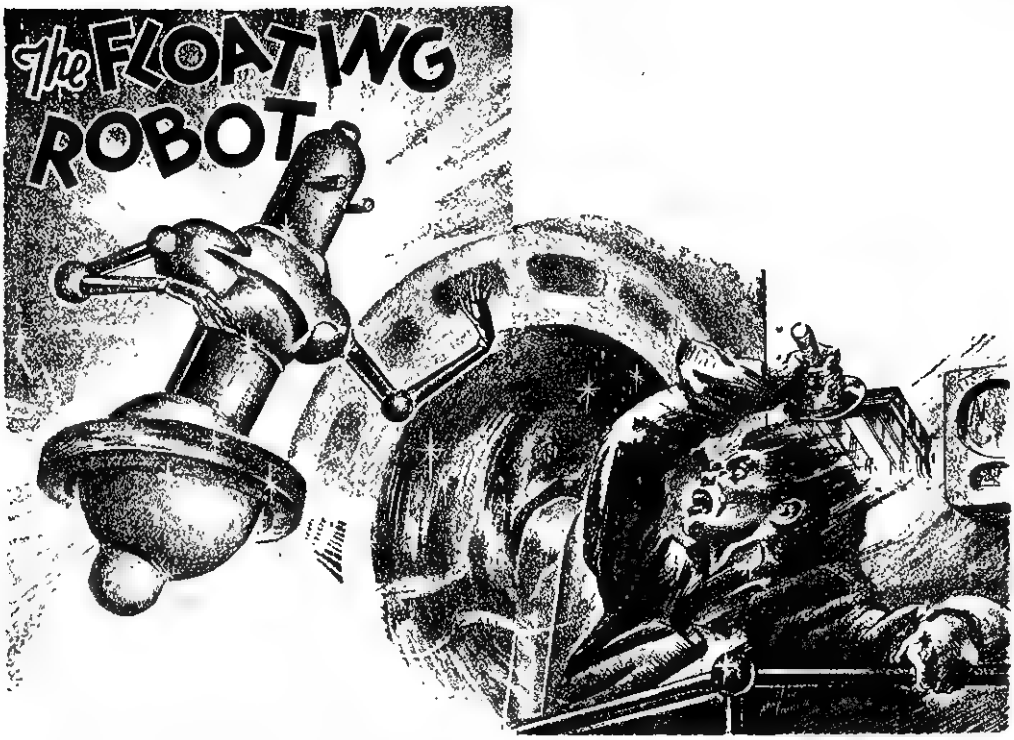
CONFIRMATION TEST

These words do not belong in the groups.

1. Nonpareil
2. Helix
3. Stencil
4. Quadric
5. Adrenalin
6. Bioscope
7. Monochromator
8. Caisson
9. Wye
10. Diamond-back
11. Touchdown
12. Barracks
13. Jamaica
14. Regulus
15. Stamen

THE KNOWLEDGE TEST

1. Correct
2. Wrong
3. Wrong
4. Correct
5. Correct
6. Wrong
7. Correct
8. Correct
9. Wrong
10. Correct
11. Wrong
12. Correct
13. Correct
14. Wrong
15. Correct
16. Wrong
17. Correct



DAN MARSHALL sat paralyzed by the phenomenon. His hand was frozen to the control switch. The hair prickled erect on his scalp, and his spine crawled! Yes, and for good reason!

There, before his aching eyes, a glow came up, a brilliant crimson glow, shot with silver flashes of incandescence. Its light revealed the most fantastic being Marshall had ever seen in any nightmare!

As it floated effortlessly in midair, the weird creature almost blinded the startled radio technician by the angry flashes from its electrically alive body. "My God!" Marshall gasped. "What is this . . . thing!"

How this incredible monster from another dimension was attracted to radio station KABL of Sharon Springs, Kansas, and created terrifying havoc throughout the country is unfolded in one of the most thrilling stories ever penned by David Wright O'Brien.

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★ **THE VANISHING WITNESSES**—by Ross Rocklynne. They vanished, these key state witnesses, into a weird world where the sun traveled too fast

★ **THE GOLDEN AMAZON RETURNS**—by Thornton Ayre. Children of the Amazon they were, and the one thing that could send her once more into battle.

★ **DR. KELTON—BODY SNATCHER**—by Richard O. Lewis. Sometimes a goal attained is a goal regretted. And so it was with Dr. Kelton and his stolen body.

★ **THE HORSE THAT TALKED**—by Edmond Hamilton. China Boy was a racehorse . . . by his own admission. But maybe China Boy was a bit inclined to boast!

fantastic ADVENTURES

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A CITY ON JUPITER

The Story Of The Back Cover

By HENRY GADE

JUPITER? Sure, I've been there. Many times. Kirikee—that's the name of the capital city—is one of the oddest, yet most beautiful cities in all the solar system. I was there in 2148, on one of Clark's Tours. I was a great hand for traveling in those days; covered the whole system from Mercury to Pluto. But I'm getting old now, and a couple of gravities is a bit too much acceleration for my brittle bones.

Oh, Kirikee . . . pardon my rambling . . . Sure, she's a striking city. I remember the first time I saw her, from the forward port of the Tour ship. Kirikee, you see, is built on the floor of an immense extinct volcano, one of the hugest in the solar system. Jupiter's the biggest planet in the whole family, you know. Roughly 83,000 miles in diameter. Well, this crater's about thirty miles across, in the main cone—part of the famous Red Spot you hear so much about, although that's 5000 miles the long way.

The first thing I saw was the biggest building on the outer planets. But it wasn't built like any building I ever saw before. It was built just like one of the inhabitants of Jupiter. In fact, it's a statue of old Kirikee, the scientist who discovered the way to draw power, heat, and light from the interior of Jupiter. That's a necessity for life, you know, because Jupiter's a heck of a long way from the sun.

You'd think this building would have been an office building, but it isn't. It's dedicated entirely to apartments, and a great many of the people of Jupiter live in it. They almost worship Kirikee, and his memory is revered and honored everywhere.

He's pictured with his hands placed benevolently on the top of one of the energy-wells that draw heat, light, and power from down in Jupiter's depths. This energy well, which looks aboveground like a giant vacuum tube with a coil atop it, is the exact duplicate of dozens of overs all over the floor of the crater, each doing its part to make the city a comfortable place.

Well, when we landed at the spaceport, we debarked. I was anxious to see the city, and I stepped out before the signal was given. I almost broke my legs; went down like a poled ox. You see, it's necessary to wear gravity neutralizers there. An ordinary man like me weighs close to 600 pounds on Jupiter.

Well, they dragged me in, slapped a degravitator on me, and we went out again. I was a little shaky, but I soon broke away from the group to tour by myself. I like it better that way.

I guess I saw everything. They have smaller houses too, thousands of 'em. They look sort of modernistic, with wide glass fronts, and all alike. They radiate in long rows from the central building, with park-like areas of grass and trees between. There are no streets, as we know 'em, but the people go where they please on the level grass. They don't walk much, or rather, they don't crawl much (a Jupiterian hasn't any real legs, but built something like a slug that crawls on the rear half of its body). They prefer to ride in the elevated electric trains that scoot them all over the whole city at terrific speed. You have to ride in one, to appreciate that speed, because with such a terrific gravity, it really takes tremendous energy to propel 'em.

I took a train to one of the power-wells, and got off. They have power houses and factories grouped around each one, and those power houses sure are something. You can figure it out for yourself. A foot-pound of energy is a lot more energy on Jupiter than it is on Earth. Anyway that machinery is tremendous, and you wonder how the slug-like people of Jupiter ever built it, or even how they had the ambition to build it. I guess if it hadn't been for Kirikee, they never would have, either.

When I left the factories, I went to the big building built in Kirikee's image. It's a colossal thing. About three hundred feet high, and one hundred feet wide by three hundred long.

They don't have stairways on Jupiter. It's too hard to lift a leg up a stair, and besides, Jupiterians haven't much in the way of legs. You go up a ramp, into each building, and inside, there are long circular ramps.

But I took one of the elevators, because I wanted to see the city from the tower, or the head, of Kirikee. Those elevators start slow, but man, do they stop fast! Gravity sure puts in its oar on that world!

All apartments, that building, and mostly artificial lighting. Outside rooms have windows, but then, outside light isn't great, because the sun's so far away. I reached the top finally, and found a window in the eye. Jupiter's capital city is some sight from there! There's color on Jupiter! The sky's brilliant red, from the reflection of the red spot, and the crater walls are purple. I'll remember it all my life. You ought to go see it sometime. It's worth the trip.

KING ARTHUR'S KNIGHT

IN A YANKEE COURT

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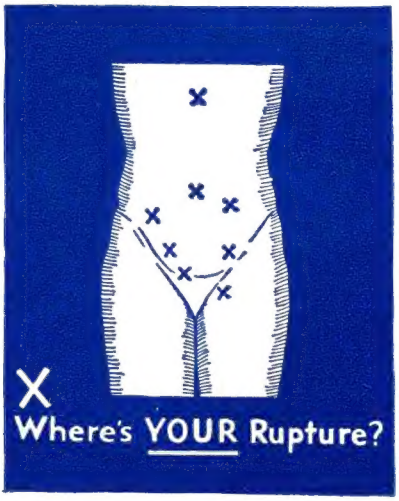

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